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United States
Department of
Agriculture

Forest Service

**Northeastern
Station**

New York State
Department of
Environmental
Conservation

Resource
Bulletin
NE-71

1982

Forest Statistics for New York, 1980

Thomas J. Considine Jr.
Thomas S. Frieswyk

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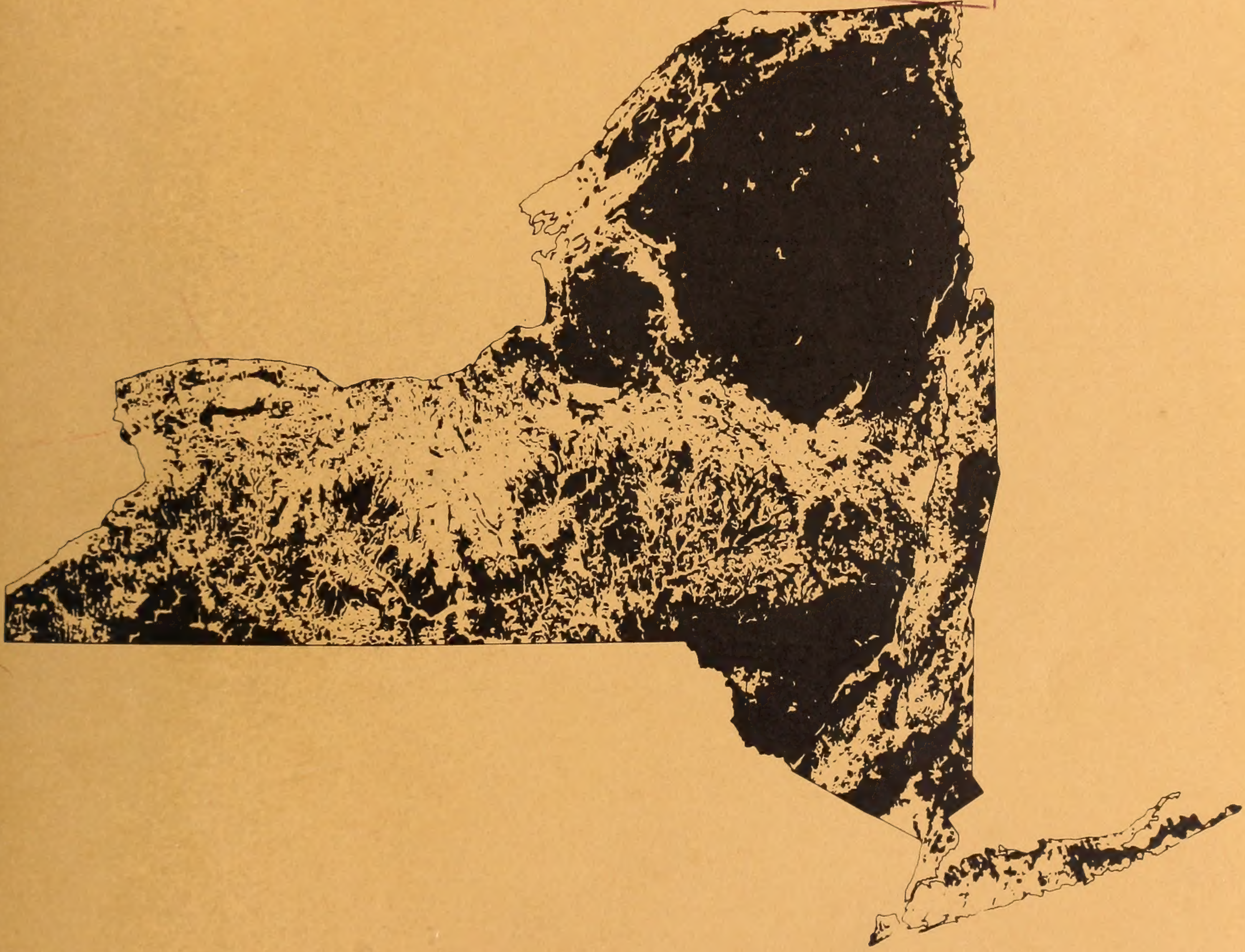

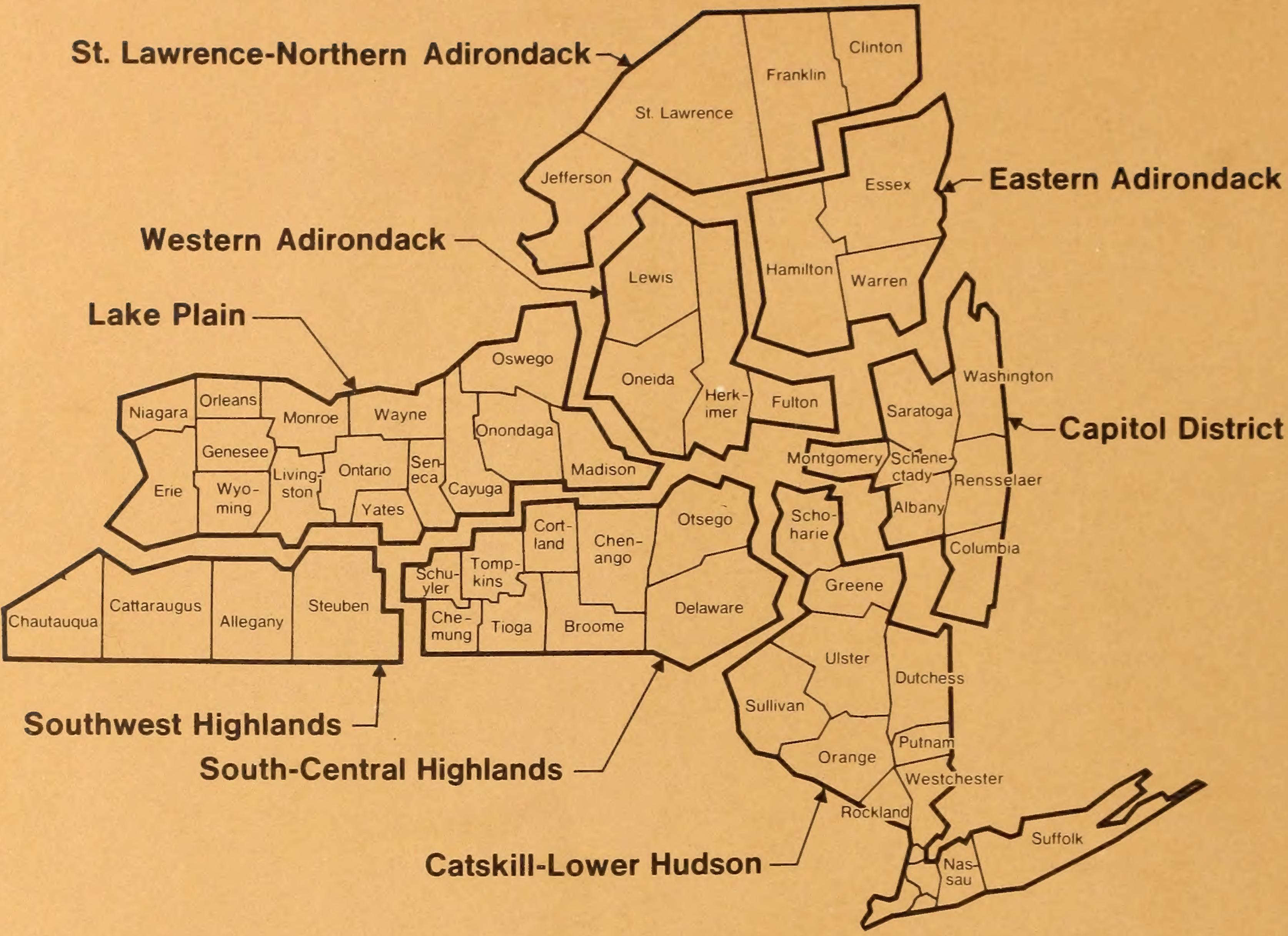

This report is included in the series of 22 technical reports that comprise the New York State Forest Resources Assessment. For a listing of the other reports contact Forest Resources Planning, Division of Lands and Forests, NYS Department of Environmental Conservation, 50 Wolf Road, Albany, NY 12233.

Forest Statistics
for New York - 1980

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Manuscript received for publication
May 5, 1982

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Foreword

The third inventory of New York was directed by Carl E. Mayer, Resources Evaluation unit leader. Joseph E. Barnard was responsible for the design of the inventory and sample selection. John R. Peters supervised the aerial-photo interpretation and data collection by the field crews. He was assisted by David J. Alerich, Daniel J. Evans, Judy L. Flory, Arthur L. Gaffrey, Karen J. Sykes, Richard H. Widmann, and Edward H. Uebler. The other field workers were: Gregory E. Baker, Anne C. Byrne, Craig Coutros, Robert E. Day, Randy L. DeMarco, Richard G. Downing, Ellen M. Eshchuck, Edward H. Falco, Frederick C. Gliesing, Michael R. Gregory, Daniel B. Helmes, Anne M. Johnson, Caroline C. Johnson, Andrew C. Karl, Mark W. Keister, Kenneth L. Kirkman, Michael R. Kress, Daniel R. Matthews, Pamela A. McIntosh, Gerard E. Milne, Jr., Tamara J. Nummi, Frank E. Parks, Jay F. Plumley, Kip V. Powers, Debra J. Rowan, Lois M. Schimmel, Jeffrey E. Seiler, Thomas D. Shearer, Roy A. Siefert, William J. Stebbins, Terrence G. Stemmler, Michael P. Taylor, Robert A. Vargo, Paul J. Wenner, Floyd A. Yoder, Marc A. Zeppetello.

David R. Dickson, Nancy M. Veronesi and Thomas S. Frieswyk applied FINSYS (Forest INventory SYStem), a generalized data processing system, to the specific data needs of the New York inventory, and produced summary tables for the state, geographic sampling units, and counties. Thomas W. Birch was instrumental in assuring that the area estimates were consistent with those from the two previous inventories, as well as in grouping the proper counties for detailed area and volume information. Teresa M. Bowers assisted in the inventory design by performing some of the calculations necessary for sampling-size determination and plot selection. Anne M. Malley helped prepare and balance the statistical tables in this report.

Robert L. Nevel and Eric H. Wharton with the assistance of Everett L. Sochia and Thomas H. Wahl, New York Department of Environmental Conservation, Division of Lands and Forests, collected and compiled the data on timber products output and timber removals.

Carmela M. Hyland was responsible for administrative and secretarial services. Catherine A. Logan typed this report.

Introduction

The USDA Forest Service inventories the forest resources of the Nation for assessment and planning activities authorized by the Renewable Resources Planning Act (RPA) of 1974 and the Renewable Resources Research Act of 1978. These inventories are conducted periodically in each state. Two previous inventories were conducted in New York and reported on in 1956 and 1970. This report presents the forest resource data from the third inventory conducted in 1978-79. This inventory involved a cooperative effort of the New York Department of Environmental Conservation, Division of Lands and Forests, and the Northeastern Forest Experiment Station. The Resources Evaluation project at the Northeastern Forest Experiment Station conducted an inventory on all of the forest land, except for some state parks, the reserved portion of the Adirondack Park, and the Catskill Park. The project also developed the summaries of resource data and prepared this report.

The 1978-79 inventory conducted by the Resources Evaluation project followed a sampling procedure that utilized aerial photography, the partial remeasurement of ground samples from earlier inventories, and new ground sample locations. In New York this required the remeasurement of 2,631 plots, the classification of 86,170 points on aerial photographs into land-use and cubic foot volume classes, and the establishment of 4,299 new ground measurement locations as a subsample of the photo points. The data collected were summarized according to the Sampling with Partial Replacement (SPR) design by the FINSYS computer system developed by the Northeastern Forest Experiment Station.

The resurvey of New York's forest resources involved several companion studies and considerable analysis. Analytical reports discussing the results of the reinventory, past trends, future supply potential, and the private forest-land owner are being prepared. A publication describing New York's primary forest products industry will be available (Nevel et al. 1982).

The forest area and timber volume statistics shown in this report are a summary of information collected. Other information or additional summaries may be developed. If interested in either additional publications or more resource data, contact the Resources Evaluation Project, USDA Forest Service, 370 Reed Road, Broomall, PA 19008 (phone 215-461-3037).

Highlights

Forest Area

New York is 61 percent forested. With 18.5 million acres of forest land, New York has more forest land than any other northeastern state. Forest land increased by nearly 1.2 million acres between 1968 and 1980, largely from abandoned pasture land.

Eighty-three percent of New York's forest land, 15.4 million acres, is classified as commercial forest land. Commercial forest land increased by nearly a million acres between surveys.

Large increases occurred in the acreage covered by poletimber and sawtimber stands as the state's forests continue to mature.

Timber Volume

New York's growing-stock volume is 15.8 billion cubic feet, an average of 1,024 cubic feet per acre. Growing-stock volume increased by 38 percent between surveys.

Sawtimber volume is 38.8 billion board feet, an average of 2,515 board feet per acre. Sawtimber volume increased by 53 percent between surveys.

Sugar maple continues to be the number one species in New York's forests. It accounts for 16 percent of the growing-stock and sawtimber volume.

For all species, growing-stock net growth was 2.7 times greater than timber removals for the period between surveys. Only basswood and elm declined in volume.

Reliability of the Estimates

Much of the data in this report was based on a carefully designed sample of forest conditions throughout the state. However, since we did not measure every tree or every acre in the state, the data are estimates. The effectiveness of the estimating procedure is judged by two important measures: accuracy and precision. Accuracy describes the closeness of a sample estimate to the true value (how much is really there). Precision refers to the variation among repeated sample estimates. We are chiefly interested in the accuracy of the survey, but in most instances we can only measure its precision.

Although accuracy cannot be measured exactly, it can be checked. Drafts of the resource report are submitted to outside experts familiar with the resources in New York. Should questions arise, the data are reviewed and reanalyzed to resolve differences. The data are also compared with those provided by other agencies. Also, great care was taken in setting up the sample, field personnel were carefully trained, and both office and field work checked.

Because of the care exercised in the survey process, our estimates of precision afford a reasonable measure of the survey's adequacy. The precision of each estimate is described by its sampling error. Some sampling errors appear in this report, others are available on request.

Here is an example of how to use sampling errors: The estimate of total growing-stock volume for New York is 15,769.9 million cubic feet. It has an associated sampling error of 0.8 percent, or 126.2 million cubic feet. This means that if there are no errors in procedure and we repeated the survey in the same way, the odds are 2 to 1 (66 percent probability) that the resulting estimate of growing-stock volume would be between 15,643.7 and 15,896.1 million cubic feet, or

15,769.9 ± 126.2 million cubic feet. Similarly there is a 95 percent probability (19 to 1) that the estimate would be within 15,769.9 ± 252.4 million cubic feet.

Estimates are most precise or reliable at the state level; state estimates have the smallest sampling errors, followed by unit estimates and then county estimates. For example, our estimate of growing-stock volume for the state has an associated sampling error of 0.8 percent; the sampling error for the Lake Plain Unit is 2.7 percent; and the sampling error for Erie county is 8 percent. Thus, county-level estimates are often considerably less reliable than unit or state-wide estimates. In general, as the size of an estimate decreases in relation to the total, the sampling error, expressed as a percent of the estimate, increases.

Since the 1968 survey some definitions and procedures have changed as a result of refinements and improvements in forest inventory and data processing techniques. Three significant changes are: (1) a new procedure for developing county-level estimates, (2) a new forest-land estimation procedure, and (3) a set of new volume estimation equations.

The first major change was the refinement of our data processing system to develop, in many cases, estimates of forest area and timber volume at the county level. In the past the data were developed at the unit level and prorated back to the county level based on the distribution of photo-interpretation points. Development of county-level data helps users interested in more accurate local data but can make trend analysis at the county level uncertain, at least until the next survey.

Not all counties had individually estimated data. Those counties that did not have at least 60,000 acres of commercial forest land were felt to not have enough plots to stand alone and were grouped with a neighboring county to produce a "supercounty". New York has two supercounties.

The second major change, a new forest-land estimation procedure, involves an analysis of previously published commercial forest land estimates. This process has two parts: a reexamination of all remeasured plots for proper land use assignment (forest vs. nonforest) and recalculation of the change in commercial forest land between surveys. The combination of these changes enabled us to estimate more accurately what a county's commercial forest-land base was in 1968 and which counties had significant changes in that base. Recalculation of 1968's commercial forest-land base produced a statewide estimate that was 133,000 acres larger than the published figure. This represented a change of 0.9 percent from the published total.

The third major change was the development of a set of new timber volume estimation equations for both growing stock and sawtimber (Scott 1979, 1981). Basically, the volumes are now estimated using a non-linear method; previously linear regression was used. Non-linear estimation yields data with smaller errors between predicted and actual values and so is deemed more fit. The effort of these revised volume estimators was to lower 1968 published estimates by about 12 percent for softwoods and 6 percent for hardwoods. Volume estimates on small diameter classes were affected more than large diameter class estimates.

To help users analyze trends, Tables 92 to 96 show recalculated 1968 data. These "must have been" data reflect the three changes in the computation process.

TO COMPARE 1980 AREA AND VOLUME ESTIMATES WITH COMPARABLE ESTIMATES FOR 1968, USE THE FIGURES IN TABLES 92 TO 96 RATHER THAN THOSE PUBLISHED PREVIOUSLY.

To compare more detailed information than that provided in Tables 92 to 96, use simple arithmetic to derive the proper figure for 1968. For example, to compare the 1968 data on growing-stock volume in sawtimber stands with the 1980 data, take the published data for 1968 found in Table 12 of Ferguson and Mayer (1970), 6,321.8 million cubic feet. This represents 51.8 percent of the total growing-stock volume of 12,199.8 million cubic feet. To obtain the adjusted 1968 figure, multiply this proportion by the recalculated 1968 total growing-stock volume. The calculation is: (0.518)(11,425.7) = 5,920.7 million cubic feet.

This figure can then be compared with the 1980 estimate, 10,236.0 million cubic feet. Contact the Resources Evaluation unit at the Northeastern Forest Experiment Station if you need additional assistance.

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Table 1.--Land area by land class, New York, 1980

Land class	Area		
		Thousand Acres	Percent
Commercial forest land		15,405.8	51
Noncommercial forest land:			
Christmas tree plantations	17.2		W
Productive reserved	2,587.0		8
Unproductive reserved	189.2		1
Other unproductive	238.2		1
Urban	68.8		W
Total noncommercial		3,100.4	10
Total forest land		18,506.2	61
Nonforest land:			
Cropland[a]	4,347.7		14
Pasture[b]	1,917.4		6
Other farmland[c]	459.6		2
Other land	5,003.9		17
Total nonforest		11,728.6	39
Total land area[d]		30,234.8	100

[a] This is harvest cropland. Source: U.S. Dep. Commer., Bur. Census, 1981. 1978 Census of Agriculture, AC-78-A-32. p. 120.

[b] Includes cropland used for pasture and other pastureland. Excludes pastured woodland. Source: same as above. p. 120-121.

[c] Includes cropland in cover crops and failed, fallow, and idle cropland. Excludes all farm woodland and miscellaneous farmland. Source: same as above. p. 120-121.

[d] U.S. Dep. Commer., Bur. Census, County and City Data Book, 1977.

W-Less than 0.5 percent

Table 2.--Forest land by geographic unit and forest-land class, New York, 1980[a]

(In thousands of acres)

Geographic unit	Commercial forest land	Christmas tree plantations	Productive reserved	Unproductive reserved	Other unproductive	Urban	All classes
Lake Plain	2,164.4	6.5	29.3	6.1	35.1	23.1	2,264.5
Southwest Highlands	1,732.5	2.9	59.0	.0	20.0	4.8	1,819.2
South-central Highlands	2,416.9	1.8	46.8	.3	13.0	3.0	2,481.8
St. Lawrence-No.Adirondack	2,598.4	.0	356.8	50.1	95.2	.0	3,100.5
Western Adirondack	1,554.8	.0	427.0	21.8	20.4	.0	2,024.0
Eastern Adirondack	1,268.0	.0	1,318.4	94.2	20.5	.0	2,701.1
Capitol District	1,394.8	1.7	44.0	.9	9.5	3.6	1,454.5
Catskill-Lower Hudson	2,276.0	4.3	305.7	15.8	24.5	34.3	2,660.6
Total, all units	15,405.8	17.2	2,587.0	189.2	238.2	68.8	18,506.2

[a] In this and other tables zeroes indicate no or negligible data. Dashes indicate no data.

Table 3.--Nonforest land by geographic unit and land class, New York, 1980

(In thousands of acres)

Geographic unit	Cropland	Pasture	Other farmland	Other land	All classes
Lake Plain	1,659.1	352.4	227.2	1,541.6	3,780.3
Southwest Highlands	491.1	266.2	61.0	470.4	1,288.7
South-central Highlands	592.4	414.0	49.0	511.4	1,566.8
St. Lawrence-No.Adirondack	505.3	328.8	38.5	375.7	1,248.3
Western Adirondack	326.3	197.1	20.1	278.6	822.1
Eastern Adirondack	28.0	11.8	2.4	101.3	143.5
Capitol District	416.3	190.1	37.4	529.0	1,172.8
Catskill-Lower Hudson	329.2	157.0	24.0	1,195.9	1,706.1
Total, all units	4,347.7	1,917.4	459.6	5,003.9	11,728.6

Table 4.--Area of commercial forest land by forest type, forest-type group, and stand-size class, New York, 1980

(In thousands of acres)

Forest type and forest-type group	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Jack pine	.0	6.0	26.1	.0	32.1
Red pine	105.6	60.3	25.0	.0	190.9
White pine	419.1	170.1	69.9	11.3	670.4
Scotch pine	19.5	11.3	26.9	.0	57.7
White pine/hemlock	206.7	50.8	25.3	.0	282.8
Hemlock	275.5	53.1	6.8	.0	335.4
White/red pine group	1,026.4	351.6	180.0	11.3	1,569.3
Balsam fir	13.3	29.0	5.6	.0	47.9
Black spruce	5.3	6.0	5.9	.0	17.2
Red spruce/balsam fir	170.3	134.9	75.3	.0	380.5
No. white-cedar	44.1	44.3	58.1	.0	146.5
Tamarack	.0	.0	11.5	.0	11.5
Larch plantation	12.4	11.8	5.7	.0	29.9
White spruce	12.0	5.9	30.1	12.9	60.9
Norway spruce	29.7	23.6	6.9	.0	60.2
Spruce/fir group	287.1	255.5	199.1	12.9	754.6
Eastern redcedar	11.7	5.5	52.0	.0	69.2
Pitch pine	7.3	9.4	.0	.0	16.7
Hard pine group	19.0	14.9	52.0	.0	85.9
W.pine/n.r.o./w.ash	17.1	25.3	34.5	.0	76.9
Other oak/pine	7.2	.0	7.2	.0	14.4
Oak/pine group	24.3	25.3	41.7	.0	91.3
Post,blk,or bear oak	27.9	19.3	24.5	.0	71.7
Chestnut oak	74.9	131.6	13.9	.0	220.4
White oak	64.0	45.5	6.0	.0	115.5
Northern red oak	280.7	149.7	16.4	.0	446.8
Scarlet oak	6.9	26.1	12.5	.0	45.5
W.oak/r.oak/hickory	213.9	153.5	29.5	6.5	403.4
Yellow-poplar	11.0	.0	.0	.0	11.0
Black locust	17.4	22.8	23.1	.0	63.3
Black walnut	13.2	6.7	5.8	.0	25.7
Hawthorn/revrt.field	6.3	19.0	74.8	80.3	180.4
R.maple/central hdwd	55.3	140.7	66.2	.0	262.2
Mixed cntrl hrdwoods	23.5	6.9	6.2	6.0	42.6
Oak/hickory group	795.0	721.8	278.9	92.8	1,888.5
Blk.ash/a.elm/r.mpl.	107.8	171.0	376.2	18.9	673.9
Cottonwood	5.8	.0	13.7	.0	19.5
Willow	18.3	13.6	91.4	90.3	213.6
Elm/ash/red maple group	131.9	184.6	481.3	109.2	907.0

Table 4.--(continued)

(In thousands of acres)

Forest type and forest-type group	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Sgr.mpl./bch/y.birch	2,613.2	1,313.8	510.3	.0	4,437.3
Black cherry	143.4	140.0	275.3	39.2	597.9
R.mpl./nrthrn hrdwds	941.1	789.1	667.8	12.4	2,410.4
Pin chry/rvrt.field	40.6	35.5	351.4	286.3	713.8
Mixed nrthrn hrdwds	284.0	288.8	586.3	12.4	1,171.5
Northern hardwoods group	4,022.3	2,567.2	2,391.1	350.3	9,330.9
Aspen	89.8	195.3	296.3	25.7	607.1
Paper birch	12.5	47.9	17.3	.0	77.7
Gray birch	.0	11.2	76.3	6.0	93.5
Aspen/birch group	102.3	254.4	389.9	31.7	778.3
Total, all groups	6,408.3	4,375.3	4,014.0	608.2	15,405.8

Table 5.--Area of commercial forest land by ownership class, forest-type group, and stand-size class, New York, 1980

(In thousands of acres)

Ownership class forest-type group	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Public					
White/red pine	101.6	16.9	17.3	.0	135.8
Spruce/fir	51.1	27.6	21.4	.0	100.1
Hard pine	.0	.0	.0	.0	.0
Oak/pine	.0	12.3	3.8	.0	16.1
Oak/hickory	32.0	18.7	41.9	.0	92.6
Elm/ash/red maple	3.8	4.6	25.9	.0	34.3
Northern hardwoods	315.7	131.3	92.4	4.4	543.8
Aspen/birch	.0	24.1	24.8	7.4	56.3
Total, public ownership	504.2	235.5	227.5	11.8	979.0
Private					
White/red pine	924.8	334.7	162.7	11.3	1,433.5
Spruce/fir	236.0	227.9	177.7	12.9	654.5
Hard pine	19.0	14.9	52.0	.0	85.9
Oak/pine	24.3	13.0	37.9	.0	75.2
Oak/hickory	763.0	703.1	237.0	92.8	1,795.9
Elm/ash/red maple	128.1	180.0	455.4	109.2	872.7
Northern hardwoods	3,706.6	2,435.9	2,298.7	345.9	8,787.1
Aspen/birch	102.3	230.3	365.1	24.3	722.0
Total, private ownership	5,904.1	4,139.8	3,786.5	596.4	14,426.8

Table 6.--Area of commercial forest land by geographic unit, ownership class, and forest-type group, New York, 1980

(In thousands of acres)

Geographic unit and ownership class	Forest-type group								All groups
	White/ red pine	Spruce/ fir	Hard pine	Oak/ pine	Oak/ hickory	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch	
Lake Plain									
Public	18.6	13.6	.0	.0	13.7	9.1	55.4	.0	110.4
Private	107.4	35.0	6.2	.0	236.9	318.1	1,317.2	33.2	2,054.0
Southwest Highlands									
Public	7.1	18.1	.0	.0	10.3	7.1	77.3	.0	119.9
Private	74.5	13.8	.0	.0	234.9	24.6	1,190.5	74.3	1,612.6
South-central Highlands									
Public	28.2	27.9	.0	.0	18.0	4.5	158.6	4.5	241.7
Private	171.7	24.9	.0	5.7	307.7	62.3	1,538.5	64.4	2,175.2
St. Lawrence-No.Adirondack									
Public	29.7	6.0	.0	.0	5.9	5.9	108.1	23.7	179.3
Private	160.7	341.7	7.3	7.3	28.2	191.6	1,419.4	262.9	2,419.1
Western Adirondack									
Public	24.7	20.6	.0	.0	.0	.0	94.3	24.2	163.8
Private	124.1	74.7	.0	.0	26.4	79.9	1,030.0	55.9	1,391.0
Eastern Adirondack									
Public	.0	.0	.0	.0	6.6	.0	10.0	.0	16.6
Private	264.9	158.1	.0	10.9	34.0	20.4	676.2	86.9	1,251.4
Capitol District									
Public	15.9	.0	.0	6.1	14.0	.0	14.9	.0	50.9
Private	273.4	6.3	5.7	11.8	223.5	85.8	638.2	99.2	1,343.9
Catskill-Lower Hudson									
Public	11.6	13.9	.0	10.0	24.1	7.7	25.2	3.9	96.4
Private	256.8	.0	66.7	39.5	704.3	90.0	977.1	45.2	2,179.6
Total, all units									
Public	135.8	100.1	.0	16.1	92.6	34.3	543.8	56.3	979.0
Private	1,433.5	654.5	85.9	75.2	1,795.9	872.7	8,787.1	722.0	14,426.8

Table 7.--Area of commercial forest land by geographic unit, ownership class, and stand-size class, New York, 1980

(In thousands of acres)

Geographic unit and ownership class	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Lake Plain					
Public	64.8	22.6	23.0	.0	110.4
Private	649.8	497.5	731.8	174.9	2,054.0
Southwest Highlands					
Public	69.2	19.0	31.7	.0	119.9
Private	601.1	434.8	453.4	123.3	1,612.6
South-central Highlands					
Public	153.7	50.5	37.5	.0	241.7
Private	824.3	609.5	653.1	88.3	2,175.2
St. Lawrence-No.Adirondack					
Public	71.3	42.3	53.9	11.8	179.3
Private	884.4	747.4	702.5	84.8	2,419.1
Western Adirondack					
Public	56.6	67.8	39.4	.0	163.8
Private	680.6	313.5	352.3	44.6	1,391.0
Eastern Adirondack					
Public	10.0	.6	6.0	.0	16.6
Private	645.6	428.3	177.5	.0	1,251.4
Capitol District					
Public	36.0	9.8	5.1	.0	50.9
Private	544.3	473.5	308.9	17.2	1,343.9
Catskill-Lower Hudson					
Public	42.6	22.9	30.9	.0	96.4
Private	1,074.0	635.3	407.0	63.3	2,179.6
Total, all units					
Public	504.2	235.5	227.5	11.8	979.0
Private	5,904.1	4,139.8	3,786.5	596.4	14,426.8

Table 8.--Area of commercial forest land by geographic unit, ownership class, and potential site productivity class, New York, 1980

(In thousands of acres)

Geographic unit and ownership class	Potential site productivity class				All classes
	120-165	85-119	50-84	20-49	
Lake Plain					
Public	27.1	27.5	37.4	18.4	110.4
Private	78.5	247.4	1,337.4	390.7	2,054.0
Southwest Highlands					
Public	7.1	28.3	63.7	20.8	119.9
Private	25.3	340.1	1,014.3	232.9	1,612.6
South-central Highlands					
Public	32.8	23.4	153.9	31.6	241.7
Private	61.2	344.5	1,408.2	361.3	2,175.2
St. Lawrence-No.Adirondack					
Public	17.9	66.2	65.1	30.1	179.3
Private	157.4	692.7	1,040.6	528.4	2,419.1
Western Adirondack					
Public	6.2	67.6	38.7	51.3	163.8
Private	24.1	235.3	719.4	412.2	1,391.0
Eastern Adirondack					
Public	.0	3.5	9.8	3.3	16.6
Private	36.3	341.5	532.4	341.2	1,251.4
Capitol District					
Public	.0	10.0	30.9	10.0	50.9
Private	98.3	317.4	674.4	253.8	1,343.9
Catskill-Lower Hudson					
Public	3.8	23.0	27.4	42.2	96.4
Private	115.3	579.4	899.4	585.5	2,179.6
Total, all units					
Public	94.9	249.5	426.9	207.7	979.0
Private	596.4	3,098.3	7,626.1	3,106.0	14,426.8

Table 9.--Area of commercial forest land by forest-type group and cubic foot stand-volume class, New York, 1980

(In thousands of acres)

Forest-type group	Stand-volume class (cubic feet per acre)						Total
	0- 499	500- 999	1000- 1499	1500- 1999	2000- 2499	2500+	
White/red pine	197.6	241.1	250.8	369.1	217.7	293.0	1,569.3
Spruce/fir	168.5	149.6	194.0	137.1	85.6	19.8	754.6
Hard pine	67.6	11.0	.0	7.3	.0	.0	85.9
Oak/pine	23.8	25.1	30.2	12.2	.0	.0	91.3
Oak/hickory	380.1	400.6	469.3	362.6	212.5	63.4	1,888.5
Elm/ash/red maple	580.0	154.9	80.9	62.7	22.0	6.5	907.0
Northern hardwoods	2,444.9	1,544.1	2,128.2	1,739.4	920.7	553.6	9,330.9
Aspen/birch	393.5	179.8	96.8	90.4	17.8	.0	778.3
Total, all groups	4,256.0	2,706.2	3,250.2	2,780.8	1,476.3	936.3	15,405.8

Table 10.--Area of commercial forest land by forest-type group and board foot stand-volume class, New York, 1980

(In thousands of acres)

Forest-type group	Stand-volume class (board feet per acre)[a]						Total
	0- 1999	2000- 3999	4000- 5999	6000- 7999	8000- 9999	10000+	
White/red pine	524.6	348.8	269.2	167.8	120.1	138.8	1,569.3
Spruce/fir	422.3	179.5	91.9	55.1	5.8	.0	754.6
Hard pine	78.6	7.3	.0	.0	.0	.0	85.9
Oak/pine	50.2	23.7	17.4	.0	.0	.0	91.3
Oak/hickory	872.0	507.0	270.7	144.1	82.2	12.5	1,888.5
Elm/ash/red maple	766.4	78.0	42.3	13.8	.0	6.5	907.0
Northern hardwoods	4,731.3	2,060.7	1,379.7	768.6	266.1	124.5	9,330.9
Aspen/birch	667.3	54.9	56.1	.0	.0	.0	778.3
Total, all groups	8,112.7	3,259.9	2,127.3	1,149.4	474.2	282.3	15,405.8

[a] International 1/4-inch rule.

Table 11.--Area of commercial forest land by forest-type group and stocking-percent class of all live trees, New York, 1980

(In thousands of acres)

Forest-type group	Stocking class (all live trees)[a]				All classes
	Over-stocked (130%+)	Fully stocked (100%-129%)	Medium stocked (60%-99%)	Poorly stocked (0%-59%)	
White/red pine	741.8	615.9	175.9	35.7	1,569.3
Spruce/fir	298.1	330.2	98.7	27.6	754.6
Hard pine	5.7	45.8	28.5	5.9	85.9
Oak/pine	12.2	68.1	11.0	.0	91.3
Oak/hickory	502.3	932.1	345.4	108.7	1,888.5
Elm/ash/red maple	97.1	312.6	296.7	200.6	907.0
Northern hardwoods	3,137.5	4,463.8	1,246.2	483.4	9,330.9
Aspen/birch	256.7	331.3	113.1	77.2	778.3
Total, all groups	5,051.4	7,099.8	2,315.5	939.1	15,405.8

[a] 100 percent stocking equals approximately 75 square feet of basal area per acre.

Table 12.--Area of commercial forest land by forest-type group and stocking-percent class of growing-stock trees, New York, 1980

(In thousands of acres)

Forest-type group	Stocking class (growing-stock trees)[a]				All classes
	Over-stocked (130%+)	Fully stocked (100%-129%)	Medium stocked (60%-99%)	Poorly stocked (0%-59%)	
White/red pine	320.5	606.7	488.5	153.6	1,569.3
Spruce/fir	118.2	287.1	290.4	58.9	754.6
Hard pine	5.7	18.3	38.9	23.0	85.9
Oak/pine	.0	61.9	18.4	11.0	91.3
Oak/hickory	190.7	727.1	675.0	295.7	1,888.5
Elm/ash/red maple	37.5	158.0	337.9	373.6	907.0
Northern hardwoods	573.2	3,260.7	3,892.7	1,604.3	9,330.9
Aspen/birch	56.8	200.1	306.0	215.4	778.3
Total, all groups	1,302.6	5,319.9	6,047.8	2,735.5	15,405.8

[a] 100 percent stocking equals approximately 75 square feet of basal area per acre.

Table 13.--Area of commercial forest land by forest type, forest-type group, and geographic unit, New York, 1980

(In thousands of acres)

Forest type and forest-type group	Lake Plain	Southwest Highlands	South-central Highlands	St. Lawrence-N. Adirondack	Western Adirondack	Eastern Adirondack	Capitol District	Catskill-Lower Hudson	All Units
Jack pine	.0	.0	6.0	20.2	.0	5.9	.0	.0	32.1
Red pine	34.2	37.0	46.3	39.3	10.9	.0	6.1	17.1	190.9
White pine	23.6	26.6	62.9	50.6	59.4	165.6	144.3	137.4	670.4
Scotch pine	26.7	.0	5.9	6.6	5.4	.0	.0	13.1	57.7
White pine/hemlock	6.4	.0	34.2	41.1	18.1	61.0	85.1	36.9	282.8
Hemlock	35.1	18.0	44.6	32.6	55.0	32.4	53.8	63.9	335.4
White/red pine group	126.0	81.6	199.9	190.4	148.8	264.9	289.3	268.4	1,569.3
Balsam fir	6.8	.0	.0	12.6	11.3	17.2	.0	.0	47.9
Black spruce	.0	.0	.0	11.2	.0	6.0	.0	.0	17.2
Red spruce/balsam fir	6.0	.0	5.6	181.7	66.7	113.8	.0	6.7	380.5
No. white-cedar	6.4	.0	6.0	117.8	.0	16.3	.0	.0	146.5
Tamarack	.0	.0	.0	6.7	.0	4.8	.0	.0	11.5
Larch plantation	18.1	.0	11.8	.0	.0	.0	.0	.0	29.9
White spruce	.0	13.0	12.9	17.7	17.3	.0	.0	.0	60.9
Norway spruce	11.3	18.9	16.5	.0	.0	.0	6.3	7.2	60.2
Spruce/fir group	48.6	31.9	52.8	347.7	95.3	158.1	6.3	13.9	754.6
Eastern redcedar	6.2	.0	.0	.0	.0	.0	5.7	57.3	69.2
Pitch pine	.0	.0	.0	7.3	.0	.0	.0	9.4	16.7
Hard pine group	6.2	.0	.0	7.3	.0	.0	5.7	66.7	85.9
W.pine/n.r.o./w.ash	.0	.0	5.7	7.3	.0	10.9	17.9	35.1	76.9
Other oak/pine	.0	.0	.0	.0	.0	.0	.0	14.4	14.4
Oak/pine group	.0	.0	5.7	7.3	.0	10.9	17.9	49.5	91.3
Post,blk,or bear oak	.0	6.3	6.0	.0	.0	.0	5.8	53.6	71.7
Chestnut oak	5.7	.0	16.9	.0	.0	5.0	57.2	135.6	220.4
White oak	6.8	20.0	18.1	7.4	.0	6.0	5.9	51.3	115.5
Northern red oak	33.7	64.2	89.5	6.7	13.7	18.5	67.6	152.9	446.8
Scarlet oak	6.9	.0	6.3	.0	.0	.0	.0	32.3	45.5
W.oak/r.oak/hickory	92.9	31.2	46.8	14.0	5.8	11.1	44.8	156.8	403.4
Yellow-poplar	.0	.0	.0	.0	.0	.0	.0	11.0	11.0
Black locust	17.1	17.7	.0	.0	.0	.0	5.2	23.3	63.3
Black walnut	19.1	.0	.0	.0	.0	.0	6.6	.0	25.7
Hawthorn/revrt.field	46.1	63.2	52.5	.0	.0	.0	13.2	5.4	180.4
R.maple/central hdwd	16.1	42.6	89.6	.0	.0	.0	25.7	88.2	262.2
Mixed cntrl hrdwoods	6.2	.0	.0	6.0	6.9	.0	5.5	18.0	42.6
Oak/hickory group	250.6	245.2	325.7	34.1	26.4	40.6	237.5	728.4	1,888.5

Forest type and forest-type group	Lake Plain	Southwest Highlands	South-central Highlands	St. Lawrence-N. Adirondack	Western Adirondack	Eastern Adirondack	Capitol District	Catskill-Lower Hudson	All Units
Blk.ash/a.elm/r.mpl.	268.9	12.4	30.7	128.8	53.5	20.4	61.5	97.7	673.9
Cottonwood	.0		5.8	8.1	.0	.0	5.6	.0	19.5
Willow	58.3	19.3	30.3	60.6	26.4	.0	18.7	.0	213.6
Elm/ash/red maple grp	327.2	31.7	66.8	197.5	79.9	20.4	85.8	97.7	907.0
Sgr.mpl./bch/y.birch	480.0	634.8	769.5	676.7	543.1	597.9	292.0	443.3	4,437.3
Black cherry	86.8	64.1	102.0	120.0	116.0	9.1	48.7	51.2	597.9
R.mpl./nrthrn hrdwds	294.7	157.6	562.9	544.9	340.0	49.0	143.1	318.2	2,410.4
Pin chry/rvrt.field	199.1	183.0	127.6	79.0	65.7	.0	30.2	29.2	713.8
Mixed nrthrn hrdwds	312.0	228.3	135.1	106.9	59.5	30.2	139.1	160.4	1,171.5
Nrthrn hrdwds grp	1,372.6	1,267.8	1,697.1	1,527.5	1,124.3	686.2	653.1	1,002.3	9,330.9
Aspen	33.2	67.9	68.9	208.4	73.4	46.6	82.6	26.1	607.1
Paper birch	.0	6.4	.0	13.8	.0	40.3	6.2	11.0	77.7
Gray birch	.0	.0	.0	64.4	6.7	.0	10.4	12.0	93.5
Aspen/birch group	33.2	74.3	68.9	286.6	80.1	86.9	99.2	49.1	778.3
Total, all groups	2,164.4	1,732.5	2,416.9	2,598.4	1,554.8	1,268.0	1,394.8	2,276.0	15,405.8

Table 14.--Number of live trees on commercial forest land by tree and diameter class, softwoods and hardwoods, New York, 1980

(In thousands of trees)

Diameter class (inches at breast height)	Softwoods			Hardwoods		
	Growing-stock	Rough and rotten	Total	Growing-stock	Rough and rotten	Total
5.0 - 6.9	188,207	27,200	215,407	522,943	162,298	685,241
7.0 - 8.9	122,944	13,766	136,710	341,329	69,055	410,384
9.0 - 10.9	69,423	10,534	79,957	0	0	0
Total poletimber	380,574	51,500	432,074	864,272	231,353	1,095,625
9.0 - 10.9	0	0	0	216,814	33,344	250,158
11.0 - 12.9	40,971	4,676	45,647	126,000	24,503	150,503
13.0 - 14.9	21,848	2,779	24,627	72,015	13,454	85,469
Total small sawtimber	62,819	7,455	70,274	414,829	71,301	486,130
15.0 - 16.9	12,059	1,319	13,378	38,088	8,153	46,241
17.0 - 18.9	6,165	997	7,162	18,571	5,000	23,571
19.0 - 20.9	3,204	503	3,707	8,565	3,242	11,807
21.0 - 28.9	3,282	864	4,147	8,639	4,670	13,309
29.0 and larger	185	146	330	1,095	1,181	2,276
Total larger sawtimber	24,895	3,829	28,724	74,958	22,246	97,204
Total, all classes	468,288	62,784	531,072	1,354,059	324,900	1,678,959

Table 15.--Number of live trees on commercial forest land by species and tree class, New York, 1980

Species	Tree class			Total all live	Proportion cull
	Growing-stock	Rough	Rotten		
	Thousands of trees				Percent
Balsam fir	38,564	922	458	39,944	3
Spruces	82,535	4,046	2,283	88,864	7
Red pine	35,199	1,456	0	36,655	4
White pine	112,492	20,675	1,255	134,422	16
Hemlock	147,008	18,252	2,713	167,973	12
Other softwoods	52,490	8,504	2,220	63,214	17
Total softwoods	468,288	53,855	8,929	531,072	12
Red maple	325,189	29,297	37,927	392,413	17
Sugar maple	272,472	15,126	20,308	307,906	12
Yellow birch	55,106	8,461	8,067	71,634	23
Sweet birch	29,035	1,437	1,832	32,304	10
Paper birch	30,841	2,256	2,079	35,176	12
Hickories	37,416	1,380	349	39,145	4
American beech	107,131	9,492	26,389	143,012	25
White ash	101,050	4,938	3,223	109,211	7
Aspens (populus)	85,914	3,207	7,906	97,027	11
Black cherry	67,937	12,958	4,917	85,812	21
Select white oaks	22,650	1,526	1,171	25,347	11
Chestnut oak	33,957	1,442	984	36,383	7
Northern red oak	81,799	2,118	2,148	86,065	5
Other oaks	15,414	544	619	16,577	7
Basswood	28,594	1,961	2,805	33,360	14
Elms	23,810	2,580	1,854	28,244	16
Other hardwoods	35,744	93,554	10,045	139,343	74
Total hardwoods	1,354,059	192,277	132,623	1,678,959	19
All species	1,822,347	246,132	141,552	2,210,031	18

Table 16.--Number of growing-stock trees on commercial forest land by species and diameter class, New York, 1980

(In thousands of trees)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	21,171	11,334	4,340	1,294	380	15	30	0	0	0	38,564
Spruces	41,350	21,076	11,277	5,087	2,258	1,007	281	131	68	0	82,535
Red pine	8,954	11,330	8,289	4,869	1,456	287	14	0	0	0	35,199
White pine	37,867	28,235	17,465	11,623	7,237	4,299	2,525	1,329	1,782	130	112,492
Hemlock	52,343	36,623	21,599	15,201	9,119	5,877	3,139	1,680	1,372	55	147,008
Other softwoods	26,522	14,346	6,453	2,897	1,398	574	176	64	60	0	52,490
Total softwoods	188,207	122,944	69,423	40,971	21,848	12,059	6,165	3,204	3,282	185	468,288
Red maple	143,644	83,544	46,772	25,872	13,274	6,302	2,849	1,331	1,423	178	325,189
Sugar maple	105,102	66,198	42,920	25,582	15,828	8,404	4,377	1,711	2,107	243	272,472
Yellow birch	20,070	13,281	8,635	5,688	3,120	2,015	953	564	676	104	55,106
Sweet birch	11,774	7,616	4,831	2,704	1,127	599	317	40	22	5	29,035
Paper birch	13,926	9,195	4,262	2,058	978	367	26	22	7	0	30,841
Hickories	16,059	10,039	5,785	2,843	1,339	633	333	176	184	25	37,416
American beech	38,023	26,735	18,007	11,153	6,467	3,388	1,868	876	593	21	107,131
White ash	40,840	25,919	15,686	9,520	4,573	2,378	1,209	541	352	32	101,050
Aspens (populus)	36,417	23,133	14,427	6,624	3,254	1,505	351	152	43	8	85,914
Black cherry	21,062	16,923	12,925	7,166	5,391	2,544	998	458	424	46	67,937
Select white oaks	5,771	5,666	3,960	2,612	1,781	1,286	789	339	388	58	22,650
Chestnut oak	9,191	10,274	7,369	3,962	1,748	965	276	83	89	0	33,957
Northern red oak	19,545	18,278	15,352	11,107	7,609	4,720	2,337	1,298	1,378	175	81,799
Other oaks	4,753	3,198	2,976	1,804	1,063	652	449	197	265	57	15,414
Basswood	7,864	7,559	4,720	3,525	2,535	1,067	755	279	250	40	28,594
Elms	13,455	5,193	2,805	1,156	540	343	180	99	39	0	23,810
Other hardwoods	15,447	8,578	5,382	2,624	1,388	920	504	399	399	103	35,744
Total hardwoods	522,943	341,329	216,814	126,000	72,015	38,088	18,571	8,565	8,639	1,095	1,354,059
All species	711,150	464,273	286,237	166,971	93,863	50,147	24,736	11,769	11,921	1,280	1,822,347

Table 17.--Net volume and weight of all live timber on commercial forest land by class of material and softwoods and hardwoods, New York, 1980

Class of material	Volume[a]			Weight[b]		
	Softwoods	Hardwoods	All species	Softwoods	Hardwoods	All species
	--------Million cubic feet-------			-----------Thousand tons------------		
Sawtimber trees:						
Sawlog portion	2,434.6	5,210.2	7,644.8	107,681.7	224,597.2	332,278.9
Upper stem	315.8	1,277.4	1,593.2	13,599.9	54,512.4	68,112.3
Total	2,750.4	6,487.6	9,238.0	121,281.6	279,109.6	400,391.2
Poletimber trees	1,116.8	5,415.1	6,531.9	37,723.7	218,872.6	256,596.3
All growing stock	3,867.2	11,902.7	15,769.9	159,005.3	497,982.2	656,987.5
Rough trees[c]	303.0	859.1	1,162.1	13,031.2	37,210.5	50,241.7
Rotten trees[c]	27.9	470.4	498.3	908.3	16,655.2	17,563.5
Saplings[d]	-	-	-	34,573.4	135,037.8	169,611.2
Stumps[e]	-	-	-	3,091.7	13,173.4	16,265.1
Tops - growing stock	-	-	-	52,082.7	161,329.2	213,411.9
Tops - rough and rotten	-	-	-	5,919.0	34,370.9	40,289.9
Total, all classes	4,198.1	13,232.2	17,430.3	268,611.6	895,759.2	1,164,370.8

[a] Excludes bark.

[b] Includes bark and sound cull; excludes rotten cull.

[c] Bole portion of trees 5.0 inches dbh and larger.

[d] Includes entire tree aboveground.

[e] Of all live trees 5.0 inches dbh and larger.

Table 18.--Net volume of growing stock and sawtimber on commercial forest land by geographic unit and stand-size class, New York, 1980

Geographic unit	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
			GROWING STOCK (Million cubic feet)		
Lake Plain	1,161.4	548.2	149.4	5.2	1,864.2
Southwest Highlands	1,123.1	549.2	121.8	2.4	1,796.5
South-central Highlands	1,732.6	798.9	129.9	.8	2,662.2
St. Lawrence-No.Adirondack	1,437.0	806.1	157.3	1.3	2,401.7
Western Adirondack	923.5	358.0	68.4	.8	1,350.7
Eastern Adirondack	1,073.3	398.9	65.1	.0	1,537.3
Capitol District	965.4	510.8	78.9	.0	1,555.1
Catskill-Lower Hudson	1,819.7	677.1	103.8	1.6	2,602.2
Total, all units	10,236.0	4,647.2	874.6	12.1	15,769.9
			SAWTIMBER (Million board feet)[a]		
Lake Plain	3,563.4	825.9	226.3	14.0	4,629.6
Southwest Highlands	3,218.2	770.2	202.2	1.6	4,192.2
South-central Highlands	5,336.3	1,162.5	202.0	3.9	6,704.7
St. Lawrence-No.Adirondack	4,145.0	993.2	252.2	4.4	5,394.8
Western Adirondack	2,720.2	479.8	103.7	.6	3,304.3
Eastern Adirondack	3,555.4	631.1	120.5	.0	4,307.0
Capitol District	3,010.2	727.4	119.9	.0	3,857.5
Catskill-Lower Hudson	5,274.5	920.1	163.8	3.7	6,362.1
Total, all units	30,823.2	6,510.2	1,390.6	28.2	38,752.2

[a] International 1/4-inch rule.

Table 19.--Net volume of growing stock and sawtimber on commercial forest land by geographic unit and forest-type group, New York, 1980

Geographic unit	Forest-type group								All groups
	White/ red pine	Spruce/ fir	Hard pine	Oak/ pine	Oak/ hickory	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch	
				GROWING STOCK (Million cubic feet)					
Lake Plain	153.6	70.0	1.0	.0	217.1	172.5	1,238.0	12.0	1,864.2
Southwest Highlands	87.5	31.9	.0	.0	249.2	11.2	1,362.3	54.4	1,796.5
South-central Highlands	297.4	52.7	.0	1.5	377.1	28.4	1,853.6	51.5	2,662.2
St. Lawrence-No.Adirondack	237.2	345.7	11.4	7.4	18.1	69.7	1,557.7	154.5	2,401.7
Western Adirondack	180.2	85.2	.0	.0	25.4	22.2	1,011.7	26.0	1,350.7
Eastern Adirondack	417.2	177.9	.0	13.5	38.2	7.4	799.2	83.9	1,537.3
Capitol District	452.2	9.7	1.1	13.3	302.5	45.7	673.1	57.5	1,555.1
Catskill-Lower Hudson	513.8	17.4	17.4	38.5	846.5	69.1	1,086.3	13.2	2,602.2
Total, all units	2,339.1	790.5	30.9	74.2	2,074.1	426.2	9,581.9	453.0	15,769.9
				SAWTIMBER (Million board feet)[a]					
Lake Plain	370.4	156.8	3.8	.0	615.8	359.9	3,120.4	2.5	4,629.6
Southwest Highlands	191.5	33.6	.0	.0	628.3	28.6	3,224.8	85.4	4,192.2
South-central Highlands	824.6	95.4	.0	1.2	857.2	52.9	4,781.4	92.0	6,704.7
St. Lawrence-No.Adirondack	646.1	668.2	27.2	9.7	47.1	99.0	3,682.3	215.2	5,394.8
Western Adirondack	526.9	186.3	.0	.0	55.0	27.0	2,478.7	30.4	3,304.3
Eastern Adirondack	1,279.6	434.1	.0	37.5	69.1	6.6	2,319.1	161.0	4,307.0
Capitol District	1,263.0	9.9	.9	26.8	767.1	79.6	1,651.6	58.6	3,857.5
Catskill-Lower Hudson	1,496.7	57.2	21.3	90.5	1,894.0	186.5	2,596.0	19.9	6,362.1
Total, all units	6,598.8	1,641.5	53.2	165.7	4,933.6	840.1	23,854.3	665.0	38,752.2

[a] International 1/4-inch rule.

Table 20.--Net volume of growing stock on commercial forest land by species and geographic unit, New York, 1980

(In millions of cubic feet)

Species	Lake Plain	Southwest Highlands	South-central Highlands	St. Lawrence- N. Adirondack	Western Adirondack	Eastern Adirondack	Capitol District	Catskill- Lower Hudson	All Units
Balsam fir	5.6	.0	3.1	116.4	22.0	51.0	.4	.0	198.5
Spruces	28.9	27.8	34.6	180.3	91.8	120.0	15.9	24.6	523.9
Red pine	54.4	28.0	81.0	92.3	14.3	19.4	10.6	20.4	320.4
White pine	62.6	41.3	110.5	101.1	78.2	298.0	242.6	243.8	1,178.1
Hemlock	136.3	118.9	228.2	94.4	151.9	167.0	240.2	232.6	1,369.5
Other softwoods	40.7	12.1	30.2	90.8	15.4	28.2	7.9	51.5	276.8
Total softwoods	328.5	228.1	487.6	675.3	373.6	683.6	517.6	572.9	3,867.2
Red maple	319.9	221.1	554.1	411.0	261.7	82.1	174.4	368.8	2,393.1
Sugar maple	314.0	408.0	458.1	421.1	193.8	248.9	175.7	294.0	2,513.6
Yellow birch	36.6	20.6	39.2	112.2	98.7	122.8	22.3	46.8	499.2
Sweet birch	4.5	29.6	46.0	1.6	.4	4.9	36.9	108.4	232.3
Paper birch	.0	4.5	12.6	48.6	1.3	79.3	34.3	15.6	196.2
Hickories	80.7	43.1	25.3	13.6	11.5	3.4	33.7	83.7	295.0
American beech	94.9	158.5	218.5	184.0	123.3	119.1	37.7	73.8	1,009.8
White ash	174.5	161.6	180.7	68.2	71.6	20.4	61.3	157.6	895.9
Aspens (populus)	49.0	100.7	103.3	173.6	46.2	66.6	70.8	42.7	652.9
Black cherry	113.2	108.0	105.5	148.3	103.7	10.5	42.4	60.9	692.5
Select white oaks	33.4	42.1	36.8	11.1	.8	4.0	21.0	116.2	265.4
Chestnut oak	11.7	.0	46.7	.0	.0	3.2	55.6	156.0	273.2
Northern red oak	84.5	163.5	225.7	27.0	12.2	63.3	177.7	277.2	1,031.1
Other oaks	12.0	9.9	16.4	.0	.0	.4	12.4	121.8	172.9
Basswood	84.7	65.0	85.7	39.0	21.5	13.3	14.0	29.8	353.0
Elms	15.5	2.8	7.0	22.7	9.7	6.2	39.3	17.6	120.8
Other hardwoods	106.6	29.4	13.0	44.4	20.7	5.3	28.0	58.4	305.8
Total hardwoods	1,535.7	1,568.4	2,174.6	1,726.4	977.1	853.7	1,037.5	2,029.3	11,902.7
All species	1,864.2	1,796.5	2,662.2	2,401.7	1,350.7	1,537.3	1,555.1	2,602.2	15,769.9

Table 21.--Net volume of sawtimber on commercial forest land by species and geographic unit, New York, 1980

(In millions of board feet)[a]

Species	Lake Plain	Southwest Highlands	South-central Highlands	St. Lawrence-N. Adirondack	Western Adirondack	Eastern Adirondack	Capitol District	Catskill-Lower Hudson	All Units
Balsam fir	2.2	.0	4.6	194.9	25.0	88.9	.0	.0	315.6
Spruces	70.5	38.9	68.4	377.2	244.5	294.5	25.7	71.7	1,191.4
Red pine	134.9	77.1	224.0	266.5	44.2	58.4	8.8	54.5	868.4
White pine	167.9	122.1	374.3	347.8	248.4	1,045.5	800.9	785.6	3,892.5
Hemlock	394.4	303.1	657.6	297.7	473.4	563.6	757.7	730.1	4,177.6
Other softwoods	80.6	8.7	62.8	172.6	28.9	54.3	8.0	122.0	537.9
Total softwoods	850.5	549.9	1,391.7	1,656.7	1,064.4	2,105.2	1,601.1	1,763.9	10,983.4
Red maple	758.0	450.6	1,183.8	630.7	543.5	157.3	269.0	677.6	4,670.5
Sugar maple	820.1	940.7	1,188.2	978.1	439.5	741.9	468.3	729.9	6,306.7
Yellow birch	55.2	26.7	75.6	297.9	250.2	467.7	47.5	86.9	1,307.7
Sweet birch	13.8	32.9	70.6	1.5	.0	5.3	86.0	215.1	425.2
Paper birch	.0	3.3	25.9	41.0	.0	134.0	55.2	15.2	274.6
Hickories	159.9	90.3	42.7	24.6	29.2	6.4	52.6	142.9	548.6
American beech	301.3	409.2	538.1	496.1	321.5	253.0	98.0	184.1	2,601.3
White ash	309.8	348.3	425.6	135.3	163.9	36.0	99.5	356.7	1,875.1
Aspens (populus)	58.4	141.7	212.9	369.1	52.4	135.5	77.2	60.5	1,107.7
Black cherry	274.8	266.1	270.3	425.0	268.8	28.8	76.4	106.1	1,716.3
Select white oaks	133.0	125.5	138.3	38.1	3.3	11.4	60.0	307.7	817.3
Chestnut oak	26.0	.0	113.5	.0	.0	6.4	83.0	268.1	497.0
Northern red oak	300.9	534.9	689.5	61.7	37.5	152.7	595.8	824.2	3,197.2
Other oaks	45.2	31.8	31.4	.0	.0	.0	30.8	331.3	470.5
Basswood	251.5	146.0	271.2	118.0	75.4	43.8	29.4	94.3	1,029.6
Elms	18.9	4.7	8.5	46.2	20.6	15.4	68.5	17.4	200.2
Other hardwoods	252.3	89.6	26.9	74.8	34.1	6.2	59.2	180.2	723.3
Total hardwoods	3,779.1	3,642.3	5,313.0	3,738.1	2,239.9	2,201.8	2,256.4	4,598.2	27,768.8
All species	4,629.6	4,192.2	6,704.7	5,394.8	3,304.3	4,307.0	3,857.5	6,362.1	38,752.2

[a] International 1/4-inch rule.

Table 22.--Net volume of growing stock on commercial forest land by species and forest-type group, New York, 1980

(In millions of cubic feet)

Species	Forest-type group								All groups
	White/ red pine	Spruce/ fir	Hard pine	Oak/ pine	Oak/ hickory	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch	
Balsam fir	5.1	139.4	.0	.0	.0	.4	48.0	5.6	198.5
Spruces	37.6	312.9	.0	.0	.8	.2	163.5	8.9	523.9
Red pine	237.8	14.3	.0	.9	6.2	3.8	48.1	9.3	320.4
White pine	821.6	40.8	3.0	27.6	57.9	6.3	189.8	31.1	1,178.1
Hemlock	576.2	15.9	.0	.3	65.2	4.1	704.0	3.8	1,369.5
Other softwoods	68.1	111.9	14.8	6.6	22.1	6.9	37.7	8.7	276.8
Total softwoods	1,746.4	635.2	17.8	35.4	152.2	21.7	1,191.1	67.4	3,867.2
Red maple	149.8	36.9	.7	3.8	201.4	151.1	1,815.1	34.3	2,393.1
Sugar maple	61.3	16.5	1.3	2.5	64.7	9.3	2,349.5	8.5	2,513.6
Yellow birch	22.2	33.7	.0	.0	2.8	.9	436.7	2.9	499.2
Sweet birch	24.1	.0	.0	.0	40.8	.0	163.9	3.5	232.3
Paper birch	28.8	9.9	1.5	.3	7.5	1.1	94.5	52.6	196.2
Hickories	12.9	4.2	1.1	6.4	114.0	8.3	146.7	1.4	295.0
American beech	25.9	1.7	.0	.0	24.0	.7	953.1	4.4	1,009.8
White ash	40.1	5.3	.4	5.2	65.8	49.1	717.1	12.9	895.9
Aspens (populus)	48.8	23.7	.5	.7	56.3	25.4	280.6	216.9	652.9
Black cherry	36.3	13.2	.4	.0	20.6	3.9	607.5	10.6	692.5
Select white oaks	15.8	.0	.6	1.6	192.1	12.4	41.3	1.6	265.4
Chestnut oak	14.6	.0	.0	1.8	243.1	.0	12.8	.9	273.2
Northern red oak	73.5	.0	1.0	13.8	649.3	4.1	270.6	18.8	1,031.1
Other oaks	4.4	.0	.7	2.0	139.9	1.2	23.8	.9	172.9
Basswood	10.4	.5	1.3	.0	20.6	5.1	310.6	4.5	353.0
Elms	13.6	5.1	.8	.7	14.6	28.3	51.5	6.2	120.8
Other hardwoods	10.2	4.6	2.8	.0	64.4	103.6	115.5	4.7	305.8
Total hardwoods	592.7	155.3	13.1	38.8	1,921.9	404.5	8,390.8	385.6	11,902.7
All species	2,339.1	790.5	30.9	74.2	2,074.1	426.2	9,581.9	453.0	15,769.9

Table 23.--Net volume of sawtimber on commercial forest land by species and forest-type group, New York, 1980

(In millions of board feet)[a]

Species	Forest-type group								All groups
	White/ red pine	Spruce/ fir	Hard pine	Oak/ pine	Oak/ hickory	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch	
Balsam fir	4.6	220.9	.0	.0	.0	.0	81.8	8.3	315.6
Spruces	95.3	662.5	.0	.0	2.1	.0	408.8	22.7	1,191.4
Red pine	679.4	11.9	.0	3.3	17.8	9.7	107.6	38.7	868.4
White pine	2,687.3	158.0	.9	94.0	182.0	18.1	672.8	79.4	3,892.5
Hemlock	1,817.3	48.7	.0	1.0	183.6	7.8	2,116.2	3.0	4,177.6
Other softwoods	113.3	226.4	27.7	20.2	63.4	4.4	61.7	20.8	537.9
Total softwoods	5,397.2	1,328.4	28.6	118.5	448.9	40.0	3,448.9	172.9	10,983.4
Red maple	214.3	49.9	.0	3.6	265.7	336.2	3,768.7	32.1	4,670.5
Sugar maple	113.1	48.3	2.1	3.2	125.1	21.8	5,977.7	15.4	6,306.7
Yellow birch	43.7	106.2	.0	.0	1.4	.0	1,150.6	5.8	1,307.7
Sweet birch	45.1	.0	.0	.0	72.0	.0	304.3	3.8	425.2
Paper birch	40.6	23.9	.0	.0	13.1	.0	155.6	41.4	274.6
Hickories	26.8	5.8	2.7	9.0	173.6	19.0	307.0	4.7	548.6
American beech	82.7	6.0	.0	.0	36.1	1.9	2,470.8	3.8	2,601.3
White ash	62.7	8.4	1.4	5.7	112.8	77.4	1,598.3	8.4	1,875.1
Aspens (populus)	62.8	30.8	.0	.0	96.9	49.5	566.3	301.4	1,107.7
Black cherry	68.8	19.1	.0	.0	39.6	10.7	1,569.6	8.5	1,716.3
Select white oaks	48.1	.0	2.6	2.1	568.1	45.0	147.3	4.1	817.3
Chestnut oak	43.5	.0	.0	3.2	423.7	.0	23.8	2.8	497.0
Northern red oak	249.8	.0	5.2	17.0	1,943.2	10.6	920.9	50.5	3,197.2
Other oaks	12.7	.0	1.2	2.6	371.2	6.3	75.1	1.4	470.5
Basswood	33.3	1.7	5.4	.0	58.9	4.4	925.9	.0	1,029.6
Elms	26.7	8.3	.0	.8	34.9	26.7	101.5	1.3	200.2
Other hardwoods	26.9	4.7	4.0	.0	148.4	190.6	342.0	6.7	723.3
Total hardwoods	1,201.6	313.1	24.6	47.2	4,484.7	800.1	20,405.4	492.1	27,768.8
All species	6,598.8	1,641.5	53.2	165.7	4,933.6	840.1	23,854.3	665.0	38,752.2

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[a] International 1/4-inch rule.

Table 24.--Net volume of growing stock on commercial forest land by species and stand-size class, New York, 1980

(In millions of cubic feet)

Species	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Balsam fir	94.6	86.9	17.0	.0	198.5
Spruces	324.1	168.8	31.0	.0	523.9
Red pine	235.7	65.2	19.5	.0	320.4
White pine	891.2	228.2	58.1	.6	1,178.1
Hemlock	1,139.9	196.2	33.4	.0	1,369.5
Other softwoods	141.4	96.8	38.4	.2	276.8
Total softwoods	2,826.9	842.1	197.4	.8	3,867.2
Red maple	1,465.2	811.7	114.9	1.3	2,393.1
Sugar maple	1,779.2	634.6	99.4	.4	2,513.6
Yellow birch	379.4	112.4	7.4	.0	499.2
Sweet birch	158.3	68.2	4.7	1.1	232.3
Paper birch	81.4	102.4	12.4	.0	196.2
Hickories	145.6	122.6	26.8	.0	295.0
American beech	712.3	270.6	26.9	.0	1,009.8
White ash	521.0	294.2	79.6	1.1	895.9
Aspens (populus)	248.4	310.9	92.3	1.3	652.9
Black cherry	402.9	236.5	50.0	3.1	692.5
Select white oaks	182.5	69.9	12.7	.3	265.4
Chestnut oak	133.4	134.1	5.7	.0	273.2
Northern red oak	651.3	340.3	39.5	.0	1,031.1
Other oaks	94.4	70.6	7.9	.0	172.9
Basswood	234.9	77.6	40.1	.4	353.0
Elms	49.9	44.5	25.8	.6	120.8
Other hardwoods	169.0	104.0	31.1	1.7	305.8
Total hardwoods	7,409.1	3,805.1	677.2	11.3	11,902.7
All species	10,236.0	4,647.2	874.6	12.1	15,769.9

Table 25.--Net volume of sawtimber on commercial forest land by species and stand-size class, New York, 1980

(In millions of board feet)[a]

Species	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Balsam fir	193.2	111.0	11.4	.0	315.6
Spruces	932.4	199.8	59.2	.0	1,191.4
Red pine	738.2	93.1	37.1	.0	868.4
White pine	3,166.0	577.1	146.8	2.6	3,892.5
Hemlock	3,654.2	457.8	65.6	.0	4,177.6
Other softwoods	394.3	106.7	36.9	.0	537.9
Total softwoods	9,078.3	1,545.5	357.0	2.6	10,983.4
Red maple	3,721.7	804.2	143.5	1.1	4,670.5
Sugar maple	5,244.2	865.1	195.7	1.7	6,306.7
Yellow birch	1,132.3	159.4	16.0	.0	1,307.7
Sweet birch	351.5	68.2	3.9	1.6	425.2
Paper birch	183.4	85.9	5.3	.0	274.6
Hickories	378.1	116.4	54.1	.0	548.6
American beech	2,165.5	388.2	47.6	.0	2,601.3
White ash	1,434.6	357.4	80.8	2.3	1,875.1
Aspens (populus)	699.1	347.8	58.8	2.0	1,107.7
Black cherry	1,268.3	351.8	87.0	9.2	1,716.3
Select white oaks	640.3	137.4	37.7	1.9	817.3
Chestnut oak	351.0	143.2	2.8	.0	497.0
Northern red oak	2,370.2	711.4	115.6	.0	3,197.2
Other oaks	321.1	131.9	17.5	.0	470.5
Basswood	823.7	123.7	80.8	1.4	1,029.6
Elms	126.5	49.3	24.4	.0	200.2
Other hardwoods	533.4	123.4	62.1	4.4	723.3
Total hardwoods	21,744.9	4,964.7	1,033.6	25.6	27,768.8
All species	30,823.2	6,510.2	1,390.6	28.2	38,752.2

[a] International 1/4-inch rule.

Table 26.--Net volume of growing stock on commercial forest land by species and diameter class, New York, 1980

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	51.9	67.7	47.0	21.1	9.2	.5	1.1	.0	.0	.0	198.5
Spruces	102.2	122.7	116.9	81.7	48.4	29.9	11.4	6.2	4.5	.0	523.9
Red pine	25.4	71.0	98.7	81.3	34.6	8.8	.6	.0	.0	.0	320.4
White pine	93.4	153.1	171.3	177.4	160.0	127.8	93.1	64.3	122.0	15.7	1,178.1
Hemlock	118.5	186.6	200.0	220.4	191.0	164.4	116.4	76.7	88.8	6.7	1,369.5
Other softwoods	56.7	67.6	57.7	41.0	27.8	15.2	5.8	2.4	2.6	.0	276.8
Total softwoods	448.1	668.7	691.6	622.9	471.0	346.6	228.4	149.6	217.9	22.4	3,867.2
Red maple	335.8	458.3	464.2	401.9	289.7	180.9	103.1	58.3	81.3	19.6	2,393.1
Sugar maple	212.8	382.6	451.6	417.2	373.5	263.2	169.8	80.1	134.4	28.4	2,513.6
Yellow birch	46.5	71.6	81.7	82.9	60.6	51.5	30.9	23.4	37.9	12.2	499.2
Sweet birch	29.0	46.8	54.0	45.0	25.3	17.6	10.8	2.1	1.3	.4	232.3
Paper birch	36.6	52.0	42.6	31.6	20.6	10.7	1.1	.7	.3	.0	196.2
Hickories	37.9	61.3	62.8	48.9	30.9	19.4	12.1	8.7	10.5	2.5	295.0
American beech	88.4	154.7	191.4	179.6	147.8	99.6	72.3	39.1	35.4	1.5	1,009.8
White ash	109.5	157.5	174.5	163.2	112.5	76.3	48.9	26.7	23.3	3.5	895.9
Aspens (populus)	100.9	144.6	156.5	108.2	74.7	44.5	13.0	7.2	2.4	.9	652.9
Black cherry	51.5	98.5	137.6	117.6	121.9	75.8	39.2	19.3	26.0	5.1	692.5
Select white oaks	14.9	30.1	38.0	38.8	36.1	34.8	26.8	15.5	23.8	6.6	265.4
Chestnut oak	23.1	56.7	64.8	54.7	32.8	24.7	9.4	2.8	4.2	.0	273.2
Northern red oak	47.8	105.3	151.6	172.2	165.1	141.3	85.4	58.1	86.1	18.2	1,031.1
Other oaks	11.9	19.3	28.9	26.1	22.0	17.9	15.1	9.1	16.1	6.5	172.9
Basswood	20.2	49.6	53.0	61.6	63.6	35.4	33.3	14.4	16.6	5.3	353.0
Elms	25.9	24.3	23.5	15.5	9.8	9.0	6.7	4.1	2.0	.0	120.8
Other hardwoods	35.0	45.0	52.5	39.0	29.0	27.2	20.2	19.4	24.7	13.8	305.8
Total hardwoods	1,227.7	1,958.2	2,229.2	2,004.0	1,615.9	1,129.8	698.1	389.0	526.3	124.5	11,902.7
All species	1,675.8	2,626.9	2,920.8	2,626.9	2,086.9	1,476.4	926.5	538.6	744.2	146.9	15,769.9

Table 27.--Net volume of sawtimber on commercial forest land by species and diameter class, New York, 1980

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	9.0–10.9	11.0–12.9	13.0–14.9	15.0–16.9	17.0–18.9	19.0–20.9	21.0–28.9	29+	
Balsam fir	171.1	92.2	44.0	2.5	5.8	.0	.0	.0	315.6
Spruces	393.5	334.5	214.8	135.2	55.3	31.6	26.5	.0	1,191.4
Red pine	334.0	330.2	156.4	44.5	3.3	.0	.0	.0	868.4
White pine	535.9	686.5	681.0	575.6	433.5	306.6	595.0	78.4	3,892.5
Hemlock	620.8	828.4	780.7	693.4	497.6	339.2	388.1	29.4	4,177.6
Other softwoods	176.7	146.0	107.6	63.5	22.7	10.0	11.4	.0	537.9
Total softwoods	2,232.0	2,417.8	1,984.5	1,514.7	1,018.2	687.4	1,021.0	107.8	10,983.4
Red maple	.0	1,514.6	1,192.6	775.6	456.2	257.4	374.6	99.5	4,670.5
Sugar maple	.0	1,640.9	1,564.8	1,162.0	776.1	371.2	647.1	144.6	6,306.7
Yellow birch	.0	335.3	257.9	224.6	136.5	103.2	186.3	63.9	1,307.7
Sweet birch	.0	180.2	105.2	77.2	45.8	10.2	5.1	1.5	425.2
Paper birch	.0	128.9	90.8	46.3	3.8	3.3	1.5	.0	274.6
Hickories	.0	181.1	128.4	86.1	53.1	38.6	50.7	10.6	548.6
American beech	.0	744.0	663.3	464.8	348.4	187.6	183.4	9.8	2,601.3
White ash	.0	632.4	475.2	320.8	209.0	116.3	106.3	15.1	1,875.1
Aspens (populus)	.0	449.0	333.5	212.1	59.8	36.3	11.9	5.1	1,107.7
Black cherry	.0	457.0	509.4	331.1	181.4	88.1	122.5	26.8	1,716.3
Select white oaks	.0	150.7	156.2	159.3	125.4	75.0	118.6	32.1	817.3
Chestnut oak	.0	201.8	127.0	100.8	38.2	12.7	16.5	.0	497.0
Northern red oak	.0	665.7	705.1	638.6	395.1	278.6	420.5	93.6	3,197.2
Other oaks	.0	98.3	87.8	76.2	66.3	38.6	71.9	31.4	470.5
Basswood	.0	246.0	279.5	165.4	160.9	71.0	82.0	24.8	1,029.6
Elms	.0	58.4	39.9	44.1	26.9	21.4	9.5	.0	200.2
Other hardwoods	.0	138.1	116.0	113.4	91.8	91.1	106.5	66.4	723.3
Total hardwoods	.0	7,822.4	6,832.6	4,998.4	3,174.7	1,800.6	2,514.9	625.2	27,768.8
All species	2,232.0	10,240.2	8,817.1	6,513.1	4,192.9	2,488.0	3,535.9	733.0	38,752.2

[a] International 1/4-inch rule.

Table 28.--Net volume of growing stock on commercial forest land by species and cubic foot stand-volume class, New York, 1980

(In millions of cubic feet)

Species	Stand-volume class (cubic feet per acre)						All classes
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+	
Balsam fir	6.7	31.8	62.1	53.9	13.9	30.1	198.5
Spruces	13.9	70.0	133.9	157.9	107.4	40.8	523.9
Red pine	7.7	27.5	40.6	71.1	52.2	121.3	320.4
White pine	41.2	99.2	237.3	312.2	199.3	288.9	1,178.1
Hemlock	16.1	69.5	206.3	323.0	294.4	460.2	1,369.5
Other softwoods	37.3	52.0	63.5	58.2	44.2	21.6	276.8
Total softwoods	122.9	350.0	743.7	976.3	711.4	962.9	3,867.2
Red maple	76.9	233.2	575.6	743.4	428.5	335.5	2,393.1
Sugar maple	64.7	213.7	570.8	764.9	520.1	379.4	2,513.6
Yellow birch	5.2	51.5	146.8	143.5	83.0	69.2	499.2
Sweet birch	2.6	23.7	42.9	54.3	58.6	50.2	232.3
Paper birch	6.3	34.9	51.4	59.5	33.0	11.1	196.2
Hickories	20.2	55.4	105.3	64.8	32.5	16.8	295.0
American beech	14.0	79.1	241.0	330.8	207.3	137.6	1,009.8
White ash	53.1	104.2	190.4	229.9	186.9	131.4	895.9
Aspens (populus)	68.1	151.7	143.7	165.3	86.1	38.0	652.9
Black cherry	36.8	77.4	162.3	159.7	125.6	130.7	692.5
Select white oaks	10.5	37.9	77.6	79.7	40.5	19.2	265.4
Chestnut oak	4.8	27.3	77.4	76.4	70.3	17.0	273.2
Northern red oak	17.1	94.4	236.8	302.3	244.4	136.1	1,031.1
Other oaks	6.5	26.3	66.0	38.2	30.4	5.5	172.9
Basswood	14.8	43.8	65.6	76.6	75.5	76.7	353.0
Elms	24.2	32.4	29.7	17.9	11.2	5.4	120.8
Other hardwoods	30.6	57.8	73.7	69.1	46.4	28.2	305.8
Total hardwoods	456.4	1,344.7	2,857.0	3,376.3	2,280.3	1,588.0	11,902.7
All species	579.3	1,694.7	3,600.7	4,352.6	2,991.7	2,550.9	15,769.9

Table 29.--Net volume of sawtimber on commercial forest land by species and board foot stand-volume class, New York, 1980

(In millions of board feet)[a]

Species	Stand-volume class (board feet per acre)						All classes
	0-1999	2000-3999	4000-5999	6000-7999	8000-9999	10000+	
Balsam fir	78.8	134.9	80.5	15.3	6.1	.0	315.6
Spruces	196.8	379.3	328.0	177.3	71.7	38.3	1,191.4
Red pine	83.2	124.7	220.7	76.0	200.5	163.3	868.4
White pine	493.7	978.8	805.7	525.2	373.1	716.0	3,892.5
Hemlock	277.0	763.4	935.6	907.6	513.8	780.2	4,177.6
Other softwoods	150.8	123.5	67.0	125.2	69.4	2.0	537.9
Total softwoods	1,280.3	2,504.6	2,437.5	1,826.6	1,234.6	1,699.8	10,983.4
Red maple	561.6	1,101.7	1,293.9	1,076.3	413.6	223.4	4,670.5
Sugar maple	601.0	1,454.3	1,715.5	1,352.8	584.7	598.4	6,306.7
Yellow birch	143.4	358.0	378.5	230.2	151.6	46.0	1,307.7
Sweet birch	23.9	95.0	96.4	107.8	69.6	32.5	425.2
Paper birch	59.5	62.6	62.9	64.5	13.8	11.3	274.6
Hickories	129.8	137.8	154.7	80.6	30.3	15.4	548.6
American beech	201.8	618.7	844.6	527.9	229.4	178.9	2,601.3
White ash	231.8	366.7	519.1	477.3	180.6	99.6	1,875.1
Aspens (populus)	275.0	360.9	291.3	108.4	55.9	16.2	1,107.7
Black cherry	321.1	410.8	426.3	347.2	173.8	37.1	1,716.3
Select white oaks	134.7	203.7	238.8	142.7	92.4	5.0	817.3
Chestnut oak	59.5	133.2	127.9	107.6	48.0	20.8	497.0
Northern red oak	308.2	888.9	826.9	627.3	342.1	203.8	3,197.2
Other oaks	82.2	184.2	97.5	59.1	40.1	7.4	470.5
Basswood	119.5	187.0	281.6	192.0	132.2	117.3	1,029.6
Elms	76.1	52.2	52.0	4.1	7.9	7.9	200.2
Other hardwoods	173.5	191.6	149.3	81.6	48.9	78.4	723.3
Total hardwoods	3,502.6	6,807.3	7,557.2	5,587.4	2,614.9	1,699.4	27,768.8
All species	4,782.9	9,311.9	9,994.7	7,414.0	3,849.5	3,399.2	38,752.2

[a] International 1/4-inch rule.

Table 30.--Net volume of growing stock on commercial forest land by species and stand-origin class, New York, 1980

(In millions of cubic feet)

Species	Stand-origin class			All classes
	Natural stand	< 40% Artificial	> 40% Artificial	
Balsam fir	188.7	6.7	3.1	198.5
Spruces	403.3	22.8	97.8	523.9
Red pine	41.9	59.2	219.3	320.4
White pine	812.6	83.3	282.2	1,178.1
Hemlock	1,350.1	10.3	9.1	1,369.5
Other softwoods	179.5	19.6	77.7	276.8
Total softwoods	2,976.1	201.9	689.2	3,867.2
Red maple	2,308.7	39.5	44.9	2,393.1
Sugar maple	2,464.0	33.0	16.6	2,513.6
Yellow birch	497.8	.5	.9	499.2
Sweet birch	225.7	1.1	5.5	232.3
Paper birch	189.9	4.2	2.1	196.2
Hickories	284.6	7.6	2.8	295.0
American beech	1,004.9	3.3	1.6	1,009.8
White ash	843.1	25.0	27.8	895.9
Aspens (populus)	607.9	24.7	20.3	652.9
Black cherry	629.9	32.7	29.9	692.5
Select white oaks	260.7	2.7	2.0	265.4
Chestnut oak	261.2	12.0	.0	273.2
Northern red oak	986.5	22.3	22.3	1,031.1
Other oaks	167.5	2.8	2.6	172.9
Basswood	345.0	4.2	3.8	353.0
Elms	114.1	3.8	2.9	120.8
Other hardwoods	285.4	14.3	6.1	305.8
Total hardwoods	11,476.9	233.7	192.1	11,902.7
All species	14,453.0	435.6	881.3	15,769.9

Table 31.--Net volume of sawtimber on commercial forest land by species, size class and standard-lumber log grade, New York, 1980

(In millions of board feet)[a]

Species	All grades	All size classes				>15" Diameter at breast height				
		Grade 1	Grade 2	Grade 3	Grade 4[b]	All grades	Grade 1	Grade 2	Grade 3	Grade 4[b]
Balsam fir[c]	315.6	.0	.0	.0	.0	.0	.0	.0	.0	.0
Spruces[c]	1,191.4	.0	.0	.0	.0	.0	.0	.0	.0	.0
Red pine	868.4	53.1	40.4	774.9	.0	48.0	3.4	.5	44.1	.0
White pine	3,892.5	151.0	673.9	1,796.0	1,271.6	1,989.1	132.8	326.0	821.4	708.9
Hemlock[c]	4,177.6	.0	.0	.0	.0	.0	.0	.0	.0	.0
Other softwoods[c]	537.9	.0	.0	.0	.0	.0	.0	.0	.0	.0
Total softwoods	10,983.4	204.1	714.3	2,570.9	1,271.6	2,037.1	136.2	326.5	865.5	708.9
Red maple	4,670.5	302.6	793.4	2,804.5	770.0	1,963.5	274.6	427.6	1,009.8	251.5
Sugar maple	6,306.7	977.1	1,511.1	2,967.7	850.8	3,101.1	858.6	825.6	1,053.2	363.7
Yellow birch	1,307.7	189.2	312.7	703.0	102.8	714.5	168.8	185.9	314.4	45.4
Sweet birch	425.2	39.5	108.9	239.4	37.4	140.0	34.1	46.7	48.2	11.0
Paper birch	274.6	22.3	56.3	155.5	40.5	55.0	11.5	13.4	24.1	6.0
Hickories	548.6	38.9	100.5	253.9	155.3	238.9	34.5	56.1	88.7	59.6
American beech	2,601.3	112.9	313.5	1,611.5	563.4	1,194.1	96.7	198.9	673.3	225.2
White ash	1,875.1	373.6	506.8	732.6	262.1	767.4	294.3	186.2	225.0	61.9
Aspens (populus)	1,107.7	63.2	240.2	628.0	176.3	325.6	53.6	108.6	131.6	31.8
Black cherry	1,716.3	218.1	315.9	929.9	252.4	749.8	184.3	132.7	343.9	88.9
Select white oaks	817.3	141.6	168.9	331.1	175.7	510.4	137.5	112.6	144.5	115.8
Chestnut oak	497.0	57.6	101.4	274.8	63.2	168.3	50.6	49.5	54.5	13.7
Northern red oak	3,197.2	823.6	865.8	1,230.5	277.3	1,826.4	768.3	482.0	443.3	132.8
Other oaks	470.5	63.1	101.1	183.3	123.0	284.2	60.6	74.3	88.6	60.7
Basswood	1,029.6	193.3	290.5	480.0	65.8	503.9	155.6	145.9	178.4	24.0
Elms	200.2	30.7	48.1	96.5	24.9	101.8	27.1	33.3	34.5	6.9
Other hardwoods	723.3	106.0	132.1	372.5	112.7	469.3	106.0	97.3	200.5	65.5
Total hardwoods	27,768.8	3,753.3	5,967.2	13,994.7	4,053.6	13,114.2	3,316.7	3,176.6	5,056.5	1,564.4
Percent of hardwood in each grade	100	13	22	50	15	100	25	24	39	12
Hardwood sampling error (in percent)	1.7	3	2	2	2	2	4	3	3	4

[a] International 1/4-inch rule.
[b] Grade 4 applies only to white pine. For hardwoods the volumes in this column are for construction logs.
[c] These species are not divided into standard-lumber grades.

Table 32.--Sampling errors for timber-volume classes, New York, 1980

(In percent)

Item	Growing-stock volume (Table 26)	Sawtimber volume (Table 27)
Species		
Balsam fir	13	16
Spruces	8	10
Red pine	16	18
White pine	6	7
Hemlock	5	6
Other softwoods	12	16
Red maple	3	5
Sugar maple	4	4
Yellow birch	6	7
Sweet birch	9	11
Paper birch	9	13
Hickories	8	10
American beech	5	6
White ash	5	6
Aspens (populus)	6	9
Black cherry	6	8
Select white oaks	9	10
Chestnut oak	11	13
Northern red oak	6	6
Other oaks	11	12
Basswood	7	8
Elms	9	14
Other hardwoods	11	12
Dbh class (inches)		
5.0 to 6.9	2	-
7.0 to 8.9	2	-
9.0 to 10.9	2	6
11.0 to 12.9	2	2
13.0 to 14.9	2	2
15.0 to 16.9	2	2
17.0 to 18.9	3	3
19.0 to 20.9	4	4
21.0 to 28.9	6	4
29.0+	8	8

Table 33.--Components of average annual net change of growing stock and sawtimber on commercial forest land, by softwoods and hardwoods, New York, 1967-1979

Component	Softwoods	Hardwoods	All species
	GROWING STOCK (Million cubic feet)		
Accretion[a]	111	449	560
Ingrowth[b]	52	175	227
Gross growth	163	624	787
Cull increment	- 16	- 61	- 77
Mortality	- 29	-123	-152
Net growth	118	440	558
Removals	- 44	-152	-196
Inventory change	74	288	362
	SAWTIMBER (Million board feet)[c]		
Accretion	261	860	1,121
Ingrowth	287	751	1,038
Gross growth	548	1,611	2,159
Cull increment	- 41	- 79	-120
Mortality	- 62	-184	-246
Net growth	445	1,348	1,793
Removals	-137	-543	-680
Inventory change	308	805	1,113

[a] Growth on initial growing stock inventory including trees that were subsequently cut.

[b] Volume of trees that became 5.0 inches dbh or larger during the period between inventories.

[c] International 1/4-inch rule.

Table 34.--Average annual net growth, removals, and mortality of growing stock and sawtimber on commercial forest land, by species, New York 1967 - 1979

Species	Growing stock			Sawtimber		
	Net growth	Timber removals	Mortality	Net growth	Timber removals	Mortality
	Million cubic feet			Million board feet[a]		
Spruce and fir	13.1	3.0	11.0	37.7	6.9	21.7
White and red pines	46.9	22.2	8.3	211.6	77.3	17.8
Hemlock	45.1	15.8	5.9	168.7	46.7	15.6
Other softwoods	12.9	3.0	3.7	27.0	6.1	6.9
Total softwoods	118	44	28	445	137	62
Red maple	91.2	18.8	10.0	271.8	83.6	9.0
Sugar maple	93.9	38.1	7.3	342.3	149.0	7.4
Birches	36.0	13.7	10.8	86.5	31.3	11.5
Hickories	8.0	3.3	1.1	22.4	11.5	1.8
Beech	41.0	16.8	15.4	96.1	32.6	29.8
Ash and black cherry	82.4	21.6	11.2	209.6	53.7	19.7
Aspens	31.0	8.8	16.2	74.9	29.6	11.4
Select white oaks	4.8	3.1	3.6	22.9	14.7	8.4
Northern red oak	33.7	12.8	2.5	186.2	98.4	2.2
Other oaks	11.9	4.7	4.3	33.3	18.2	3.1
Basswood	3.1	3.2	4.1	15.2	5.4	8.3
Elms	-15.6	4.0	38.6	-54.1	7.8	70.6
Other hardwoods	18.0	3.0	.9	40.9	7.2	.7
Total hardwoods	440	152	126	1,348	543	184
Total, all species	558	196	155	1,793	680	246

[a] International 1/4-inch rule.

Table 35.--Output of timber products, by source of material, softwoods and hardwoods, New York, 1979

Product and species group	Standard units	Output from roundwood		Output from manufacturing residues		Total output	
		Number of units	Thousand cubic feet	Number of units	Thousand cubic feet	Number of units	Thousand cubic feet
Sawlogs							
Softwood	Mbf[a]	171,713	27,915	-	-	171,713	27,915
Hardwood	Mbf	424,185	64,082	-	-	424,185	64,082
Total	Mbf	595,898	91,997	-	-	595,898	91,997
Veneer logs and bolts							
Softwood	Mbf	4	1	-	-	4	1
Hardwood	Mbf	12,574	1,910	-	-	12,574	1,910
Total	Mbf	12,578	1,911	-	-	12,578	1,911
Pulpwood							
Softwood	Std cords[b]	134,800	11,458	58,200	4,947	193,000	16,405
Hardwood	Std cords	516,000	43,860	149,200	12,682	665,200	56,542
Total	Std cords	650,800	55,318	207,400	17,629	858,200	72,947
Bat stock							
Softwood	Mbf	-	-	-	-	-	-
Hardwood	Mbf	5,903	899	-	-	5,903	899
Total	Mbf	5,903	899	-	-	5,903	899
Piling							
Softwood	M linear ft	146	92	-	-	146	92
Hardwood	M linear ft	-	-	-	-	-	-
Total	M linear ft	146	92	-	-	146	92
Poles							
Softwood	M pieces	63	391	-	-	63	391
Hardwood	M pieces	10	60	-	-	10	60
Total	M pieces	73	451	-	-	73	451
Posts and fencing							
Softwood	M pieces	136	84	-	-	136	84
Hardwood	M pieces	-	-	-	-	-	-
Total	M pieces	136	84	-	-	136	84

Product and species group	Standard units	Output from roundwood		Output from manufacturing residues		Total output	
		Number of units	Thousand cubic feet	Number of units	Thousand cubic feet	Number of units	Thousand cubic feet
Cabin logs							
Softwood	M linear ft	551	347	-	-	551	347
Hardwood	M linear ft	1	1	-	-	1	1
Total	M linear ft	552	348	-	-	552	348
Other[c]							
Softwood	Mft^3		15		-		15
Hardwood	Mft^3		1,139		3		1,142
Total	Mft^3		1,154		3		1,157
Total industrial products							
Softwood	Mft^3		40,303		4,947		45,250
Hardwood	Mft^3		111,951		12,685		124,636
Total	Mft^3		152,254		17,632		169,886
Fuelwood[d]							
Softwood	std cords[e]	132,820	10,625	96,462	7,717	229,282	18,342
Hardwood	std cords	3,187,685	255,015	145,400	11,632	3,333,085	266,647
Total	std cords	3,320,505	265,640	241,862	19,349	3,562,367	284,989
All product[f]							
Softwood	Mft^3		50,928		12,664		63,592
Hardwood	Mft^3		366,966		24,317		391,283
Total	Mft^3		417,894		36,981		454,875

[a] International 1/4-inch rule.

[b] Rough wood basis, includes both production from roundwood and chips from manufacturing residues, equivalent to 85 ft^3 of solid wood.

[c] Includes bowl stock, handles, ladders, shingles, dimension stock, and chemical wood.

[d] The estimate of fuelwood output from roundwood is from: 1981 Residential Fuelwood Assessment, by the New York Department of Environmental Conservation, Division of Lands and Forests. We assumed their published figure of 3,388,270 cords includes 67,765 cords of manufacturing residues used for fuelwood. We substituted an estimate derived from a complete canvass of wood-using mills, which includes industrial fuelwood as well as residential fuelwood.

[e] Rough wood basis, includes both production from roundwood and chips from manufacturing residues, equivalent to 80 ft^3 of solid wood.

[f] Does not include 5,418 cubic feet of softwood and 13,331 cubic feet of hardwood residues used for agricultural bedding.

Table 36.--Output of roundwood products, by source, softwoods and hardwoods, New York, 1979

(In thousands of cubic feet)

Product and species group	Growing-stock trees[a]			Rough and rotten trees[a]	Salvable dead trees[a]	Other sources[b]	All sources
	Poletimber	Sawtimber	Total				
			PRINCIPAL INDUSTRIAL PRODUCTS				
Sawlogs							
Softwood	519	26,972	27,491	82	-	342	27,915
Hardwood	231	60,412	60,643	1,460	300	1,679	64,082
Total	750	87,384	88,134	1,542	300	2,021	91,997
Veneer logs and bolts							
Softwood	-	1	1	-	-	-	1
Hardwood	7	1,852	1,859	-	-	51	1,910
Total	7	1,853	1,860	-	-	51	1,911
Pulpwood							
Softwood	1,834	8,728	10,562	566	-	330	11,458
Hardwood	3,449	29,985	33,434	4,386	-	6,040	43,860
Total	5,283	38,713	43,996	4,952	-	6,370	55,318
			MISCELLANEOUS INDUSTRIAL PRODUCTS				
Bat stock							
Softwood	-	-	-	-	-	-	-
Hardwood	3	847	850	18	4	27	899
Total	3	847	850	18	4	27	899
Piling							
Softwood	-	92	92	-	-	-	92
Hardwood	-	-	-	-	-	-	-
Total	-	92	92	-	-	-	92
Poles							
Softwood	-	391	391	-	-	-	391
Hardwood	2	47	49	4	-	7	60
Total	2	438	440	4	-	7	451
Posts and fencing							
Softwood	-	84	84	-	-	-	84
Hardwood	-	-	-	-	-	-	-
Total	-	84	84	-	-	-	84
Cabin logs							
Softwood	6	336	342	1	-	4	347
Hardwood	-	1	1	-	-	-	1
Total	6	337	343	1	-	4	348
Other							
Softwood	-	15	15	-	-	-	15
Hardwood	41	894	935	73	-	131	1,139
Total	41	909	950	73	-	131	1,154

Table 36.--(continued)

(In thousands of cubic feet)

Product and species group	Growing-stock trees[a]			Rough and rotten trees[a]	Salvable dead trees[a]	Other sources[b]	All sources
	Poletimber	Sawtimber	Total				
			TOTAL INDUSTRIAL PRODUCTS				
Softwood	2,359	36,619	38,978	649	-	676	40,303
Hardwood	3,733	94,038	97,771	5,941	304	7,935	111,951
Total	6,092	130,657	136,749	6,590	304	8,611	152,254
			NONINDUSTRIAL PRODUCTS				
Fuelwood[c]							
Softwood	250	1,189	1,439	584	4,776	3,826	10,625
Hardwood	5,529	26,316	31,845	20,522	114,642	88,006	255,015
Total	5,779	27,505	33,284	21,106	119,418	91,832	265,640
			ALL PRODUCTS				
Softwood	2,609	37,808	40,417	1,233	4,776	4,502	50,928
Hardwood	9,262	120,354	129,616	26,463	114,946	95,941	366,966
Total	11,871	158,162	170,033	27,696	119,722	100,443	417,894

[a] On commercial forest land.

[b] Includes trees less than 5.0 inches in diameter, tree tops and limbs from commercial forest areas, or any material from noncommercial forest land or nonforest land such as fence rows and suburban areas.

[c] The fuelwood estimate is from: 1981 Residential Fuelwood Assessment, by the New York Department of Environmental Conservation, Divison of Lands and Forests. All fuelwood from "live standing trees" in their report should not be assumed to be from growing stock. This would overstate the removal from growing stock sources. We have adjusted their estimates to reflect the growing-stock, unmerchantable topwood, and cull tree components of "live standing trees".

Table 37.--Timber removals from growing stock and sawtimber on commercial forest land, by item, softwoods and hardwoods, New York, 1979

Item	Growing stock			Sawtimber		
	Softwoods	Hardwoods	All species	Softwoods	Hardwoods	All species
	--------Thousand cubic feet--------			------Thousand board feet[a]-----		
Roundwood products:						
Sawlogs	27,491	60,643	88,134	115,603	389,806	505,409
Veneer logs and bolts	1	1,859	1,860	4	11,949	11,953
Pulpwood	10,562	33,434	43,996	21,829	74,993	96,822
Bat stock	-	850	850	-	5,438	5,438
Piling	92	-	92	405	-	405
Poles	391	49	440	1,720	216	1,936
Posts and fencing	84	-	84	370	-	370
Cabin logs	342	1	343	1,420	6	1,426
Other	15	935	950	66	3,932	3,998
Fuelwood[b]	1,439	31,845	33,284	2,974	65,816	68,790
All products	40,417	129,616	170,033	144,391	552,156	696,547
Logging residues	11,856	35,646	47,502	8,055	12,810	20,865
Land clearing	3,202	10,500	13,702	8,058	20,374	28,432
Administrative withdrawals & other removals	5,001	15,455	20,456	11,466	29,186	40,652
Total removals	60,476	191,217	251,693	171,970	614,526	786,496

[a] International 1/4-inch rule.

[b] The fuelwood estimate is from: 1981 Residential Fuelwood Assessment, by the New York Department of Environmental Conservation, Divison of Lands and Forests.

Table 38.--Volume of unused residues from primary manufacturing plants, by industry and type of residue, softwoods and hardwoods, New York, 1979

(In thousands of cubic feet)

Species group and type of residue	Lumber	Veneer and plywood	Other	All industries
Softwoods				
Coarse[a]	665	-	68	733
Fine[b]	421	-	45	466
Total	1,086	-	113	1,199
Hardwoods				
Coarse	801	16	32	849
Fine	779	-	-	779
Total	1,580	16	32	1,628
All species				
Coarse	1,466	16	100	1,582
Fine	1,200	-	45	1,245
Total	2,666	16	145	2,827

[a] Includes slabs, edgings, trimmings, veneer cores, and other material suitable for chipping.

[b] Includes sawdust, shavings, and other materials considered unsuitable for chipping.

Table 39.--Area of commercial forest land by forest type, forest-type group, and stand-size class, Lake Plain Unit, New York, 1980

(In thousands of acres)

Forest type and forest-type group	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Red pine	23.2	11.0	.0	.0	34.2
White pine	11.7	11.9	.0	.0	23.6
Scotch pine	.0	5.4	21.3	.0	26.7
White pine/hemlock	.0	6.4	.0	.0	6.4
Hemlock	16.8	11.5	6.8	.0	35.1
White/red pine group	51.7	46.2	28.1	.0	126.0
Balsam fir	.0	6.8	.0	.0	6.8
Red spruce/balsam fir	.0	6.0	.0	.0	6.0
No. white-cedar	.0	.0	6.4	.0	6.4
Larch plantation	12.4	.0	5.7	.0	18.1
Norway spruce	11.3	.0	.0	.0	11.3
Spruce/fir group	23.7	12.8	12.1	.0	48.6
Eastern redcedar	6.2	.0	.0	.0	6.2
Hard pine group	6.2	.0	.0	.0	6.2
Chestnut oak	5.7	.0	.0	.0	5.7
White oak	6.8	.0	.0	.0	6.8
Northern red oak	23.8	4.7	5.2	.0	33.7
Scarlet oak	6.9	.0	.0	.0	6.9
W.oak/r.oak/hickory	45.6	36.1	11.2	.0	92.9
Black locust	.0	5.9	11.2	.0	17.1
Black walnut	6.6	6.7	5.8	.0	19.1
Hawthorn/revrt.field	.0	.0	.0	46.1	46.1
R.maple/central hdwd	.0	9.6	6.5	.0	16.1
Mixed cntrl hrdwoods	.0	.0	6.2	.0	6.2
Oak/hickory group	95.4	63.0	46.1	46.1	250.6
Blk.ash/a.elm/r.mpl.	47.9	53.4	155.9	11.7	268.9
Willow	11.9	13.6	11.7	21.1	58.3
Elm/ash/red maple group	59.8	67.0	167.6	32.8	327.2
Sgr.mpl./bch/y.birch	289.1	135.5	55.4	.0	480.0
Black cherry	12.6	24.1	31.6	18.5	86.8
R.mpl./nrthrn hrdwds	122.8	80.5	91.4	.0	294.7
Pin chry/rvrt.field	6.8	11.6	103.2	77.5	199.1
Mixed nrthrn hrdwds	46.5	68.8	196.7	.0	312.0
Northern hardwoods group	477.8	320.5	478.3	96.0	1,372.6
Aspen	.0	10.6	22.6	.0	33.2
Aspen/birch group	.0	10.6	22.6	.0	33.2
Total, all groups	714.6	520.1	754.8	174.9	2,164.4

Table 40.--Net volume and weight of all live timber on commercial forest land by class of material and softwoods and hardwoods, Lake Plain Unit, New York, 1980

Class of material	Volume[a]			Weight[b]		
	Softwoods	Hardwoods	All species	Softwoods	Hardwoods	All species
	--------Million cubic feet-------			-----------Thousand tons------------		
Sawtimber trees:						
Sawlog portion	191.0	709.0	900.0	8,248.5	29,490.5	37,739.0
Upper stem	26.8	166.9	193.7	1,143.8	6,837.1	7,980.9
Total	217.8	875.9	1,093.7	9,392.3	36,327.6	45,719.9
Poletimber trees	110.7	659.8	770.5	3,751.0	24,985.9	28,736.9
All growing stock	328.5	1,535.7	1,864.2	13,143.3	61,313.5	74,456.8
Rough trees[c]	35.7	119.2	154.9	1,464.6	4,825.0	6,289.6
Rotten trees[c]	1.4	44.1	45.5	38.2	1,436.6	1,474.8
Saplings[d]	-	-	-	2,708.9	21,030.9	23,739.8
Stumps[e]	-	-	-	278.5	1,570.3	1,848.8
Tops - growing stock	-	-	-	4,636.2	20,053.8	24,690.0
Tops - rough and rotten	-	-	-	568.4	3,749.7	4,318.1
Total, all classes	365.6	1,699.0	2,064.6	22,838.1	113,979.8	136,817.9

[a] Excludes bark.

[b] Includes bark and sound cull; excludes rotten cull.

[c] Bole portion of trees 5.0 inches dbh and larger.

[d] Includes entire tree aboveground.

[e] Of all live trees 5.0 inches dbh and larger.

Table 41.--Net volume of growing stock on commercial forest land by species and diameter class, Lake Plain Unit, New York, 1980

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	3.5	1.5	.6	.0	.0	.0	.0	.0	.0	.0	5.6
Spruces	3.0	6.7	9.6	6.9	1.7	1.0	.0	.0	.0	.0	28.9
Red pine	6.0	15.4	10.8	14.1	7.1	1.0	.0	.0	.0	.0	54.4
White pine	4.5	15.6	15.7	9.6	7.5	2.7	3.4	2.6	1.0	.0	62.6
Hemlock	14.3	22.1	21.5	21.0	18.2	16.3	11.9	4.5	6.1	.4	136.3
Other softwoods	8.7	9.4	11.8	5.1	4.7	1.0	.0	.0	.0	.0	40.7
Total softwoods	40.0	70.7	70.0	56.7	39.2	22.0	15.3	7.1	7.1	.4	328.5
Red maple	39.0	45.9	49.4	49.5	44.5	31.9	24.0	12.6	18.0	5.1	319.9
Sugar maple	34.0	37.2	54.5	52.1	48.3	39.4	18.9	12.2	14.2	3.2	314.0
Yellow birch	6.1	8.4	8.0	4.9	4.9	.4	1.0	2.1	.8	.0	36.6
Sweet birch	.9	.6	.4	.8	.7	.0	.6	.5	.0	.0	4.5
Paper birch	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Hickories	9.3	16.5	18.3	10.2	6.5	7.6	3.6	4.1	3.0	1.6	80.7
American beech	4.1	12.0	14.4	11.7	13.6	10.6	11.7	6.5	9.1	1.2	94.9
White ash	31.4	36.4	30.5	28.6	18.9	11.3	9.3	3.9	3.0	1.2	174.5
Aspens (populus)	8.3	15.4	10.3	5.1	3.3	3.3	1.2	.8	.7	.6	49.0
Black cherry	6.8	14.8	28.5	18.4	12.0	9.7	10.9	2.7	8.0	1.4	113.2
Select white oaks	2.2	.6	2.4	3.1	4.6	5.7	3.5	3.6	6.7	1.0	33.4
Chestnut oak	1.6	.4	4.0	1.6	1.8	1.9	.4	.0	.0	.0	11.7
Northern red oak	2.1	6.4	12.9	13.2	11.1	11.1	6.8	5.2	12.6	3.1	84.5
Other oaks	.0	1.4	.7	.0	1.9	2.7	1.0	.8	3.0	.5	12.0
Basswood	5.3	9.1	14.3	13.7	17.3	7.5	6.8	3.9	5.6	1.2	84.7
Elms	5.0	3.2	2.7	1.8	.0	.5	1.2	1.1	.0	.0	15.5
Other hardwoods	11.8	12.1	20.2	12.8	10.9	9.7	4.6	5.9	10.4	8.2	106.6
Total hardwoods	167.9	220.4	271.5	227.5	200.3	153.3	105.5	65.9	95.1	28.3	1,535.7
All species	207.9	291.1	341.5	284.2	239.5	175.3	120.8	73.0	102.2	28.7	1,864.2

Table 42.--Net volume of sawtimber on commercial forest land by species and diameter class, Lake Plain Unit, New York, 1980

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	2.2	.0	.0	.0	.0	.0	.0	.0	2.2
Spruces	32.2	27.3	7.3	3.7	.0	.0	.0	.0	70.5
Red pine	39.6	59.4	30.7	5.2	.0	.0	.0	.0	134.9
White pine	48.7	41.6	31.0	13.8	14.9	14.0	3.9	.0	167.9
Hemlock	68.0	80.5	76.7	71.7	50.9	18.7	26.2	1.7	394.4
Other softwoods	39.0	18.6	18.6	4.4	.0	.0	.0	.0	80.6
Total softwoods	229.7	227.4	164.3	98.8	65.8	32.7	30.1	1.7	850.5
Red maple	.0	184.3	184.7	132.0	102.5	53.0	79.0	22.5	758.0
Sugar maple	.0	202.1	207.0	176.9	89.5	57.1	72.0	15.5	820.1
Yellow birch	.0	15.8	21.0	1.9	4.3	9.0	3.2	.0	55.2
Sweet birch	.0	4.3	2.7	.0	3.6	3.2	.0	.0	13.8
Paper birch	.0	.0	.0	.0	.0	.0	.0	.0	.0
Hickories	.0	39.9	29.3	34.7	16.9	19.6	13.4	6.1	159.9
American beech	.0	46.6	65.7	46.6	59.2	28.3	47.0	7.9	301.3
White ash	.0	112.1	77.8	47.0	39.0	16.1	13.3	4.5	309.8
Aspens (populus)	.0	19.9	10.5	12.1	4.7	4.2	3.4	3.6	58.4
Black cherry	.0	71.6	48.9	45.5	49.2	14.0	39.7	5.9	274.8
Select white oaks	.0	12.6	21.9	26.1	16.7	16.2	34.5	5.0	133.0
Chestnut oak	.0	7.1	7.4	9.0	2.5	.0	.0	.0	26.0
Northern red oak	.0	53.2	52.6	52.7	34.3	28.2	63.3	16.6	300.9
Other oaks	.0	.0	8.1	11.9	5.8	2.8	14.5	2.1	45.2
Basswood	.0	56.5	74.2	35.3	33.7	17.9	28.7	5.2	251.5
Elms	.0	6.8	.0	1.9	5.2	5.0	.0	.0	18.9
Other hardwoods	.0	43.2	43.2	38.8	19.8	25.4	44.3	37.6	252.3
Total hardwoods	.0	876.0	855.0	672.4	486.9	300.0	456.3	132.5	3,779.1
All species	229.7	1,103.4	1,019.3	771.2	552.7	332.7	486.4	134.2	4,629.6

[a] International 1/4-inch rule.

Table 43.--Net volume of sawtimber on commercial forest land by species, size class, and standard-lumber log grade, Lake Plain Unit, New York, 1980

(In millions of board feet)[a]

Species	All grades	All size classes				>15" Diameter at breast height				
		Grade 1	Grade 2	Grade 3	Grade 4[b]	All grades	Grade 1	Grade 2	Grade 3	Grade 4[b]
Balsam fir[c]	2.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
Spruces[c]	70.5	.0	.0	.0	.0	.0	.0	.0	.0	.0
Red pine	134.9	12.1	11.4	111.4	.0	5.3	1.3	.2	3.8	.0
White pine	167.9	7.3	29.7	84.2	46.7	46.6	5.2	6.4	18.0	17.0
Hemlock[c]	394.4	.0	.0	.0	.0	.0	.0	.0	.0	.0
Other softwoods[c]	80.6	.0	.0	.0	.0	.0	.0	.0	.0	.0
Total softwoods	850.5	19.4	41.1	195.6	46.7	51.9	6.5	6.6	21.8	17.0
Red maple	758.0	76.1	142.8	418.1	121.0	389.1	74.1	90.8	175.4	48.8
Sugar maple	820.1	129.0	187.5	385.8	117.8	411.0	119.3	103.6	138.1	50.0
Yellow birch	55.2	5.4	11.6	35.7	2.5	18.4	4.9	4.6	8.5	.4
Sweet birch	13.8	4.5	4.9	3.9	.5	6.8	4.5	.9	1.2	.2
Paper birch	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Hickories	159.9	11.5	28.4	77.8	42.2	90.7	11.5	18.8	36.5	23.9
American beech	301.3	18.2	41.5	173.8	67.8	189.0	17.1	36.8	95.3	39.8
White ash	309.8	55.2	68.2	122.7	63.7	119.9	39.2	34.0	34.8	11.9
Aspens (populus)	58.4	2.1	5.8	29.4	21.1	27.9	2.1	4.9	14.0	6.9
Black cherry	274.8	42.6	30.1	153.6	48.5	154.3	41.4	17.9	76.3	18.7
Select white oaks	133.0	16.8	27.8	52.1	36.3	98.6	15.0	21.1	33.4	29.1
Chestnut oak	26.0	3.4	.6	15.3	6.7	11.6	3.4	.6	6.5	1.1
Northern red oak	300.9	94.5	62.3	116.5	27.6	195.0	90.3	40.7	47.5	16.5
Other oaks	45.2	8.1	4.7	16.3	16.1	37.1	8.1	4.7	11.4	12.9
Basswood	251.5	45.0	67.3	117.2	22.0	120.8	34.4	40.0	40.6	5.8
Elms	18.9	4.4	4.9	7.9	1.7	12.1	4.4	4.9	2.2	.6
Other hardwoods	252.3	27.9	42.3	137.5	44.6	165.9	27.9	32.8	79.0	26.2
Total hardwoods	3,779.1	544.7	730.7	1,863.6	640.1	2,048.2	497.6	457.1	800.7	292.8
Percent of hardwood in each grade	100	15	19	49	17	100	24	22	39	15
Hardwood sampling error (in percent)	4.7	8	6	4	6	6	8	8	6	8

[a] International 1/4-inch rule.
[b] Grade 4 applies only to white pine. For hardwoods the volumes in this column are for construction logs.
[c] These species are not divided into standard-lumber grades.

Table 44.--Sampling errors for timber-volume classes, Lake Plain Unit, New York, 1980

(In percent)

Item	Growing-stock volume (Table 41)	Sawtimber volume (Table 42)
Species		
Balsam fir	93	100
Spruces	44	53
Red pine	34	43
White pine	28	28
Hemlock	15	17
Other softwoods	40	57
Red maple	11	14
Sugar maple	10	12
Yellow birch	19	23
Sweet birch	45	43
Paper birch	0	0
Hickories	14	19
American beech	15	17
White ash	11	15
Aspens (populus)	21	34
Black cherry	15	16
Select white oaks	25	26
Chestnut oak	43	45
Northern red oak	17	19
Other oaks	39	43
Basswood	14	17
Elms	22	47
Other hardwoods	15	17
Dbh class (inches)		
5.0 to 6.9	7	-
7.0 to 8.9	6	-
9.0 to 10.9	5	19
11.0 to 12.9	5	6
13.0 to 14.9	6	6
15.0 to 16.9	7	7
17.0 to 18.9	9	9
19.0 to 20.9	10	10
21.0 to 28.9	9	9
29.0+	19	17

Table 45.--Area of commercial forest land by forest type, forest-type group, and stand-size class, Southwest Highlands Unit, New York, 1980

(In thousands of acres)

Forest type and forest-type group	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Red pine	5.9	25.1	6.0	.0	37.0
White pine	20.2	6.4	.0	.0	26.6
Hemlock	13.0	5.0	.0	.0	18.0
White/red pine group	39.1	36.5	6.0	.0	81.6
White spruce	6.1	.0	6.9	.0	13.0
Norway spruce	.0	12.0	6.9	.0	18.9
Spruce/fir group	6.1	12.0	13.8	.0	31.9
Post,blk,or bear oak	.0	.0	6.3	.0	6.3
White oak	13.6	6.4	.0	.0	20.0
Northern red oak	57.8	6.4	.0	.0	64.2
W.oak/r.oak/hickory	12.0	12.8	6.4	.0	31.2
Black locust	11.9	.0	5.8	.0	17.7
Hawthorn/revrt.field	.0	13.4	31.8	18.0	63.2
R.maple/central hdwd	6.1	24.1	12.4	.0	42.6
Oak/hickory group	101.4	63.1	62.7	18.0	245.2
Blk.ash/a.elm/r.mpl.	6.0	.0	6.4	.0	12.4
Willow	.0	.0	13.1	6.2	19.3
Elm/ash/red maple group	6.0	.0	19.5	6.2	31.7
Sgr.mpl./bch/y.birch	335.6	197.9	101.3	.0	634.8
Black cherry	12.9	26.4	18.5	6.3	64.1
R.mpl./nrthrn hrdwds	51.1	31.0	69.1	6.4	157.6
Pin chry/rvrt.field	26.8	7.0	62.8	86.4	183.0
Mixed nrthrn hrdwds	78.8	49.3	100.2	.0	228.3
Northern hardwoods group	505.2	311.6	351.9	99.1	1,267.8
Aspen	12.5	24.2	31.2	.0	67.9
Paper birch	.0	6.4	.0	.0	6.4
Aspen/birch group	12.5	30.6	31.2	.0	74.3
Total, all groups	670.3	453.8	485.1	123.3	1,732.5

Table 46.--Net volume and weight of all live timber on commercial forest land by class of material and softwoods and hardwoods, Southwest Highlands Unit, New York, 1980

Class of material	Volume[a]			Weight[b]		
	Softwoods	Hardwoods	All species	Softwoods	Hardwoods	All species
	--------Million cubic feet-------			-----------Thousand tons------------		
Sawtimber trees:						
Sawlog portion	131.4	709.8	841.2	5,664.9	30,749.8	36,414.7
Upper stem	18.3	175.0	193.3	775.7	7,486.3	8,262.0
Total	149.7	884.8	1,034.5	6,440.6	38,236.1	44,676.7
Poletimber trees	78.4	683.6	762.0	2,590.5	27,541.2	30,131.7
All growing stock	228.1	1,568.4	1,796.5	9,031.1	65,777.3	74,808.4
Rough trees[c]	21.0	95.2	116.2	732.2	4,086.6	4,818.8
Rotten trees[c]	1.1	35.2	36.3	56.0	1,227.5	1,283.5
Saplings[d]	-	-	-	2,633.1	14,729.5	17,362.6
Stumps[e]	-	-	-	208.5	1,519.3	1,727.8
Tops - growing stock	-	-	-	3,355.0	20,231.4	23,586.4
Tops - rough and rotten	-	-	-	402.0	3,281.5	3,683.5
Total, all classes	250.2	1,698.8	1,949.0	16,417.9	110,853.1	127,271.0

[a] Excludes bark.

[b] Includes bark and sound cull; excludes rotten cull.

[c] Bole portion of trees 5.0 inches dbh and larger.

[d] Includes entire tree aboveground.

[e] Of all live trees 5.0 inches dbh and larger.

Table 47.--Net volume of growing stock on commercial forest land by species and diameter class, Southwest Highlands Unit, New York, 1980

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0–6.9	7.0–8.9	9.0–10.9	11.0–12.9	13.0–14.9	15.0–16.9	17.0–18.9	19.0–20.9	21.0–28.9	29+	
Balsam fir	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Spruces	8.3	7.3	5.5	4.7	1.5	.5	.0	.0	.0	.0	27.8
Red pine	.6	5.5	9.1	9.5	3.3	.0	.0	.0	.0	.0	28.0
White pine	5.0	6.2	6.8	6.2	7.1	4.4	2.6	1.8	.5	.7	41.3
Hemlock	14.9	20.9	19.3	20.2	19.2	12.5	6.0	3.3	2.6	.0	118.9
Other softwoods	3.9	5.8	2.4	.0	.0	.0	.0	.0	.0	.0	12.1
Total softwoods	32.7	45.7	43.1	40.6	31.1	17.4	8.6	5.1	3.1	.7	228.1
Red maple	31.6	37.5	38.8	46.9	26.4	15.4	6.5	5.2	11.0	1.8	221.1
Sugar maple	36.9	74.8	68.4	61.4	59.1	39.2	28.4	11.6	18.9	9.3	408.0
Yellow birch	3.9	3.1	6.9	3.3	2.1	.3	.0	.0	1.0	.0	20.6
Sweet birch	4.8	7.4	8.6	5.0	2.1	1.1	.6	.0	.0	.0	29.6
Paper birch	2.0	1.8	.0	.0	.7	.0	.0	.0	.0	.0	4.5
Hickories	6.6	6.4	7.5	6.1	8.0	2.9	3.1	1.1	1.4	.0	43.1
American beech	15.4	21.7	27.5	28.0	27.7	16.5	10.6	5.0	6.1	.0	158.5
White ash	19.6	29.4	23.7	37.3	19.8	14.5	8.8	4.2	3.3	1.0	161.6
Aspens (populus)	13.5	23.1	29.3	21.5	9.4	3.9	.0	.0	.0	.0	100.7
Black cherry	6.6	14.4	21.4	17.6	20.7	9.6	6.0	4.7	5.6	1.4	108.0
Select white oaks	1.4	4.7	8.5	5.8	4.3	5.3	4.8	2.7	3.9	.7	42.1
Chestnut oak	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Northern red oak	4.1	12.6	17.1	30.3	29.0	20.9	15.8	14.1	15.6	4.0	163.5
Other oaks	.6	1.2	1.4	1.5	1.4	.9	1.2	.8	.9	.0	9.9
Basswood	6.2	10.8	13.3	9.5	10.9	5.5	2.8	3.5	.7	1.8	65.0
Elms	.6	.4	.4	1.0	.0	.0	.0	.4	.0	.0	2.8
Other hardwoods	2.8	2.4	2.5	4.5	4.2	2.6	3.1	3.8	2.1	1.4	29.4
Total hardwoods	156.6	251.7	275.3	279.7	225.8	138.6	91.7	57.1	70.5	21.4	1,568.4
All species	189.3	297.4	318.4	320.3	256.9	156.0	100.3	62.2	73.6	22.1	1,796.5

Table 48.--Net volume of sawtimber on commercial forest land by species and diameter class, Southwest Highlands Unit, New York, 1980

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	.0	.0	.0	.0	.0	.0	.0	.0	.0
Spruces	15.7	15.6	5.6	2.0	.0	.0	.0	.0	38.9
Red pine	27.2	35.5	14.4	.0	.0	.0	.0	.0	77.1
White pine	23.4	24.7	28.6	19.5	11.6	8.4	2.5	3.4	122.1
Hemlock	57.9	73.0	73.1	48.5	26.9	13.2	10.5	.0	303.1
Other softwoods	8.7	.0	.0	.0	.0	.0	.0	.0	8.7
Total softwoods	132.9	148.8	121.7	70.0	38.5	21.6	13.0	3.4	549.9
Red maple	.0	173.1	107.3	64.4	25.6	22.0	49.1	9.1	450.6
Sugar maple	.0	228.1	235.8	164.9	129.4	52.4	84.5	45.6	940.7
Yellow birch	.0	12.3	8.6	.8	.0	.0	5.0	.0	26.7
Sweet birch	.0	16.9	8.4	5.1	2.5	.0	.0	.0	32.9
Paper birch	.0	.0	3.3	.0	.0	.0	.0	.0	3.3
Hickories	.0	19.4	33.2	11.9	13.9	5.3	6.6	.0	90.3
American beech	.0	114.4	116.6	75.5	49.9	25.1	27.7	.0	409.2
White ash	.0	134.2	81.3	60.7	36.7	19.1	11.9	4.4	348.3
Aspens (populus)	.0	83.3	39.2	19.2	.0	.0	.0	.0	141.7
Black cherry	.0	64.0	82.1	40.5	27.8	20.8	23.8	7.1	266.1
Select white oaks	.0	24.3	18.0	24.1	22.4	13.8	19.3	3.6	125.5
Chestnut oak	.0	.0	.0	.0	.0	.0	.0	.0	.0
Northern red oak	.0	107.4	113.8	89.9	67.9	63.6	73.0	19.3	534.9
Other oaks	.0	6.0	6.4	4.1	6.4	3.8	5.1	.0	31.8
Basswood	.0	36.3	44.8	23.8	12.6	16.2	3.4	8.9	146.0
Elms	.0	2.7	.0	.0	.0	2.0	.0	.0	4.7
Other hardwoods	.0	14.8	16.0	12.1	14.9	17.5	9.5	4.8	89.6
Total hardwoods	.0	1,037.2	914.8	597.0	410.0	261.6	318.9	102.8	3,642.3
All species	132.9	1,186.0	1,036.5	667.0	448.5	283.2	331.9	106.2	4,192.2

[a] International 1/4-inch rule.

Table 49.--Net volume of sawtimber on commercial forest land by species, size class, and standard-lumber log grade, Southwest Highlands Unit, New York, 1980

(In millions of board feet)[a]

Species	All grades	All size classes				>15" Diameter at breast height				
		Grade 1	Grade 2	Grade 3	Grade 4[b]	All grades	Grade 1	Grade 2	Grade 3	Grade 4[b]
Balsam fir[c]	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Spruces[c]	38.9	.0	.0	.0	.0	.0	.0	.0	.0	.0
Red pine	77.1	.0	9.4	67.7	.0	.0	.0	.0	.0	.0
White pine	122.1	5.9	22.7	57.0	36.5	45.4	4.6	5.8	15.6	19.4
Hemlock[c]	303.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
Other softwoods[c]	8.7	.0	.0	.0	.0	.0	.0	.0	.0	.0
Total softwoods	549.9	5.9	32.1	124.7	36.5	45.4	4.6	5.8	15.6	19.4
Red maple	450.6	43.9	63.1	257.9	85.7	170.2	38.5	34.3	73.0	24.4
Sugar maple	940.7	135.7	210.6	452.5	141.9	476.9	125.2	109.4	176.1	66.2
Yellow birch	26.7	2.4	2.0	18.9	3.4	5.8	2.1	.4	3.0	.3
Sweet birch	32.9	.3	10.5	16.6	5.5	7.6	.0	3.8	1.2	2.6
Paper birch	3.3	.0	1.3	.5	1.5	.0	.0	.0	.0	.0
Hickories	90.3	2.6	16.7	46.2	24.8	37.7	1.3	9.6	17.9	8.9
American beech	409.2	25.4	62.6	225.1	96.1	178.2	22.4	38.8	76.8	40.2
White ash	348.3	68.6	72.9	159.4	47.4	132.8	59.2	24.6	38.7	10.3
Aspens (populus)	141.7	1.8	12.7	96.1	31.1	19.2	1.8	4.3	9.8	3.3
Black cherry	266.1	28.0	41.6	155.7	40.8	119.9	28.0	23.7	55.6	12.6
Select white oaks	125.5	20.6	26.0	51.3	27.6	83.2	20.6	17.3	25.1	20.2
Chestnut oak	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Northern red oak	534.9	118.8	137.6	230.6	47.9	313.7	115.0	81.1	91.9	25.7
Other oaks	31.8	1.3	9.5	13.6	7.4	19.4	.0	7.7	7.1	4.6
Basswood	146.0	25.8	41.6	69.6	9.0	64.9	19.0	18.7	24.3	2.9
Elms	4.7	.0	1.3	2.9	.5	2.0	.0	1.3	.6	.1
Other hardwoods	89.6	18.4	18.7	39.3	13.2	58.8	18.4	13.1	19.1	8.2
Total hardwoods	3,642.3	493.6	728.7	1,836.2	583.8	1,690.3	451.5	388.1	620.2	230.5
Percent of hardwood in each grade	100	14	20	50	16	100	27	23	37	13
Hardwood sampling error (in percent)	4.5	13	6	5	6	7	14	8	7	10

[a] International 1/4-inch rule.

[b] Grade 4 applies only to white pine. For hardwoods the volumes in this column are for construction logs.

[c] These species are not divided into standard-lumber grades.

Table 50.--Sampling errors for timber-volume classes, Southwest Highlands Unit, New York, 1980

(In percent)

Item	Growing-stock volume (Table 47)	Sawtimber volume (Table 48)
Species		
Balsam fir	0	0
Spruces	47	62
Red pine	39	41
White pine	27	29
Hemlock	16	17
Other softwoods	44	76
Red maple	11	15
Sugar maple	9	11
Yellow birch	25	31
Sweet birch	29	45
Paper birch	61	71
Hickories	20	27
American beech	12	14
White ash	12	15
Aspens (populus)	17	24
Black cherry	16	18
Select white oaks	27	33
Chestnut oak	0	0
Northern red oak	17	18
Other oaks	54	54
Basswood	20	24
Elms	50	74
Other hardwoods	26	29
Dbh class (inches)		
5.0 to 6.9	7	-
7.0 to 8.9	6	-
9.0 to 10.9	6	19
11.0 to 12.9	6	7
13.0 to 14.9	6	7
15.0 to 16.9	8	7
17.0 to 18.9	10	10
19.0 to 20.9	13	12
21.0 to 28.9	15	13
29.0+	24	24

Table 51.--Area of commercial forest land by forest type, forest-type group, and stand-size class, South-central Highlands Unit, New York, 1980

(In thousands of acres)

Forest type and forest-type group	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Jack pine	.0	6.0	.0	.0	6.0
Red pine	40.5	5.8	.0	.0	46.3
White pine	17.7	22.5	17.1	5.6	62.9
Scotch pine	.0	5.9	.0	.0	5.9
White pine/hemlock	28.8	.0	5.4	.0	34.2
Hemlock	44.6	.0	.0	.0	44.6
White/red pine group	131.6	40.2	22.5	5.6	199.9
Red spruce/balsam fir	5.6	.0	.0	.0	5.6
No. white-cedar	.0	.0	6.0	.0	6.0
Larch plantation	.0	11.8	.0	.0	11.8
White spruce	.0	.0	.0	12.9	12.9
Norway spruce	11.2	5.3	.0	.0	16.5
Spruce/fir group	16.8	17.1	6.0	12.9	52.8
W.pine/n.r.o./w.ash	.0	.0	5.7	.0	5.7
Oak/pine group	.0	.0	5.7	.0	5.7
Post,blk,or bear oak	.0	6.0	.0	.0	6.0
Chestnut oak	.0	16.9	.0	.0	16.9
White oak	11.8	6.3	.0	.0	18.1
Northern red oak	53.7	30.1	5.7	.0	89.5
Scarlet oak	.0	6.3	.0	.0	6.3
W.oak/r.oak/hickory	23.1	23.7	.0	.0	46.8
Hawthorn/revrt.field	.0	5.6	36.1	10.8	52.5
R.maple/central hdwd	6.4	41.4	41.8	.0	89.6
Oak/hickory group	95.0	136.3	83.6	10.8	325.7
Blk.ash/a.elm/r.mpl.	.0	12.0	18.7	.0	30.7
Cottonwood	5.8	.0	.0	.0	5.8
Willow	6.4	.0	5.4	18.5	30.3
Elm/ash/red maple group	12.2	12.0	24.1	18.5	66.8
Sgr.mpl./bch/y.birch	467.1	202.8	99.6	.0	769.5
Black cherry	30.0	13.3	58.7	.0	102.0
R.mpl./nrthrn hrdwds	195.5	158.0	203.4	6.0	562.9
Pin chry/rvrt.field	.0	6.0	87.1	34.5	127.6
Mixed nrthrn hrdwds	18.0	52.0	65.1	.0	135.1
Northern hardwoods group	710.6	432.1	513.9	40.5	1,697.1
Aspen	11.8	22.3	34.8	.0	68.9
Aspen/birch group	11.8	22.3	34.8	.0	68.9
Total, all groups	978.0	660.0	690.6	88.3	2,416.9

Table 52.--Net volume and weight of all live timber on commercial forest land by class of material and softwoods and hardwoods, South-central Highlands Unit, New York, 1980

Class of material	Volume[a]			Weight[b]		
	Softwoods	Hardwoods	All species	Softwoods	Hardwoods	All species
	--------Million cubic feet-------			-----------Thousand tons------------		
Sawtimber trees:						
Sawlog portion	300.3	921.4	1,221.7	13,087.5	38,326.7	51,414.2
Upper stem	40.5	234.7	275.2	1,746.5	9,687.5	11,434.0
Total	340.8	1,156.1	1,496.9	14,834.0	48,014.2	62,848.2
Poletimber trees	146.8	1,018.5	1,165.3	5,187.2	40,105.2	45,292.4
All growing stock	487.6	2,174.6	2,662.2	20,021.2	88,119.4	108,140.6
Rough trees[c]	51.3	145.1	196.4	2,146.9	6,443.9	8,590.8
Rotten trees[c]	1.8	69.0	70.8	54.4	2,491.4	2,545.8
Saplings[d]	-	-	-	3,469.2	20,798.6	24,267.8
Stumps[e]	-	-	-	423.7	2,223.0	2,646.7
Tops - growing stock	-	-	-	6,827.0	27,777.7	34,604.7
Tops - rough and rotten	-	-	-	882.4	5,030.7	5,913.1
Total, all classes	540.7	2,388.7	2,929.4	33,824.8	152,884.7	186,709.5

[a] Excludes bark.

[b] Includes bark and sound cull; excludes rotten cull.

[c] Bole portion of trees 5.0 inches dbh and larger.

[d] Includes entire tree aboveground.

[e] Of all live trees 5.0 inches dbh and larger.

Table 53.--Net volume of growing stock on commercial forest land by species and diameter class, South-central Highlands Unit, New York, 1980

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	.7	1.4	.4	.0	.6	.0	.0	.0	.0	.0	3.1
Spruces	6.7	9.2	11.5	4.2	2.3	.7	.0	.0	.0	.0	34.6
Red pine	3.7	20.7	29.9	20.2	5.0	1.5	.0	.0	.0	.0	81.0
White pine	9.8	15.6	12.4	18.0	15.5	9.3	9.3	6.7	13.6	.3	110.5
Hemlock	25.4	39.7	34.3	40.4	34.1	24.3	11.6	7.8	9.9	.7	228.2
Other softwoods	5.9	8.0	7.0	4.1	3.9	1.3	.0	.0	.0	.0	30.2
Total softwoods	52.2	94.6	95.5	86.9	61.4	37.1	20.9	14.5	23.5	1.0	487.6
Red maple	78.1	105.4	108.2	99.5	71.6	39.0	17.7	10.0	16.0	8.6	554.1
Sugar maple	35.7	69.2	90.8	93.0	78.0	41.1	21.4	8.2	18.7	2.0	458.1
Yellow birch	5.1	10.1	7.8	6.0	4.4	2.2	1.1	1.8	.7	.0	39.2
Sweet birch	6.2	8.9	15.9	8.4	1.5	3.4	1.3	.4	.0	.0	46.0
Paper birch	2.8	1.8	1.8	2.8	2.3	1.1	.0	.0	.0	.0	12.6
Hickories	4.2	7.3	4.0	3.9	3.1	1.7	.0	.0	1.1	.0	25.3
American beech	17.6	42.9	46.6	37.6	30.2	19.0	13.6	6.4	4.6	.0	218.5
White ash	18.2	30.6	38.8	33.9	26.3	15.7	7.6	4.9	4.7	.0	180.7
Aspens (populus)	18.7	19.3	19.3	18.9	17.5	7.5	1.0	.5	.6	.0	103.3
Black cherry	8.6	15.1	22.2	21.3	18.7	11.5	5.2	.0	2.9	.0	105.5
Select white oaks	1.8	3.4	3.0	8.4	8.0	5.8	3.6	1.7	1.1	.0	36.8
Chestnut oak	2.1	8.8	7.8	11.3	6.7	7.3	2.4	.3	.0	.0	46.7
Northern red oak	10.6	23.3	45.7	39.8	34.1	30.4	18.9	8.8	11.5	2.6	225.7
Other oaks	.9	3.1	5.3	4.9	1.2	.4	.0	.0	.6	.0	16.4
Basswood	3.5	12.6	13.2	15.4	15.9	9.6	10.2	2.5	2.1	.7	85.7
Elms	1.9	1.9	1.5	.4	.0	.4	.0	.9	.0	.0	7.0
Other hardwoods	1.7	2.6	2.6	2.4	.7	.4	.7	1.2	.4	.3	13.0
Total hardwoods	217.7	366.3	434.5	407.9	320.2	196.5	104.7	47.6	65.0	14.2	2,174.6
All species	269.9	460.9	530.0	494.8	381.6	233.6	125.6	62.1	88.5	15.2	2,662.2

Table 54.--Net volume of sawtimber on commercial forest land by species and diameter class, South-central Highlands Unit, New York, 1980

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	1.7	.0	2.9	.0	.0	.0	.0	.0	4.6
Spruces	39.1	16.7	9.6	3.0	.0	.0	.0	.0	68.4
Red pine	106.9	86.1	23.5	7.5	.0	.0	.0	.0	224.0
White pine	41.4	73.9	70.3	45.1	43.6	31.9	66.2	1.9	374.3
Hemlock	110.7	158.5	148.3	107.7	50.7	32.9	45.1	3.7	657.6
Other softwoods	24.2	16.2	16.5	5.9	.0	.0	.0	.0	62.8
Total softwoods	324.0	351.4	271.1	169.2	94.3	64.8	111.3	5.6	1,391.7
Red maple	.0	403.8	324.3	183.2	90.1	50.0	84.0	48.4	1,183.8
Sugar maple	.0	391.0	354.7	191.7	102.7	39.0	96.9	12.2	1,188.2
Yellow birch	.0	28.7	20.1	10.0	5.7	8.6	2.5	.0	75.6
Sweet birch	.0	38.1	7.5	16.8	6.4	1.8	.0	.0	70.6
Paper birch	.0	10.5	10.8	4.6	.0	.0	.0	.0	25.9
Hickories	.0	16.0	13.1	8.2	.0	.0	5.4	.0	42.7
American beech	.0	165.3	143.4	99.2	72.1	33.8	24.3	.0	538.1
White ash	.0	143.0	124.1	72.8	37.2	24.9	23.6	.0	425.6
Aspens (populus)	.0	79.9	86.0	37.2	4.7	2.8	2.3	.0	212.9
Black cherry	.0	91.3	85.6	51.9	26.4	.0	15.1	.0	270.3
Select white oaks	.0	35.3	37.1	30.4	18.7	9.8	7.0	.0	138.3
Chestnut oak	.0	42.3	28.1	30.2	10.8	2.1	.0	.0	113.5
Northern red oak	.0	165.1	156.0	145.0	96.6	46.4	63.2	17.2	689.5
Other oaks	.0	20.7	5.6	2.1	.0	.0	3.0	.0	31.4
Basswood	.0	67.7	76.5	46.1	52.0	15.1	10.1	3.7	271.2
Elms	.0	1.3	.0	2.0	.0	5.2	.0	.0	8.5
Other hardwoods	.0	10.0	2.7	2.2	3.0	5.3	1.9	1.8	26.9
Total hardwoods	.0	1,710.0	1,475.6	933.6	526.4	244.8	339.3	83.3	5,313.0
All species	324.0	2,061.4	1,746.7	1,102.8	620.7	309.6	450.6	88.9	6,704.7

[a] International 1/4-inch rule.

Table 55.--Net volume of sawtimber on commercial forest land by species, size class, and standard-lumber log grade, South-central Highlands Unit, New York, 1980

(In millions of board feet)[a]

Species	All grades	All size classes				>15" Diameter at breast height				
		Grade 1	Grade 2	Grade 3	Grade 4[b]	All grades	Grade 1	Grade 2	Grade 3	Grade 4[b]
Balsam fir[c]	4.6	.0	.0	.0	.0	.0	.0	.0	.0	.0
Spruces[c]	68.4	.0	.0	.0	.0	.0	.0	.0	.0	.0
Red pine	224.0	14.8	2.0	207.2	.0	7.5	.0	.0	7.5	.0
White pine	374.3	7.4	54.9	168.0	144.0	188.7	6.3	23.2	66.8	92.4
Hemlock[c]	657.6	.0	.0	.0	.0	.0	.0	.0	.0	.0
Other softwoods[c]	62.8	.0	.0	.0	.0	.0	.0	.0	.0	.0
Total softwoods	1,391.7	22.2	56.9	375.2	144.0	196.2	6.3	23.2	74.3	92.4
Red maple	1,183.8	63.1	239.7	728.2	152.8	455.7	52.6	96.7	264.5	41.9
Sugar maple	1,188.2	142.7	314.7	579.6	151.2	442.5	116.5	144.6	128.8	52.6
Yellow birch	75.6	7.7	19.9	42.1	5.9	26.9	7.1	7.9	8.8	3.1
Sweet birch	70.6	9.6	16.5	39.1	5.4	25.0	8.9	6.5	6.9	2.7
Paper birch	25.9	6.3	5.5	10.6	3.5	4.6	3.2	1.0	.2	.2
Hickories	42.7	1.0	10.3	19.2	12.2	13.6	1.0	4.9	4.0	3.7
American beech	538.1	21.9	69.0	358.8	88.4	229.3	18.1	41.0	143.5	26.7
White ash	425.6	96.3	137.8	143.0	48.5	158.5	70.7	35.9	40.6	11.3
Aspens (populus)	212.9	10.3	53.3	118.2	31.1	47.1	3.8	20.2	18.0	5.1
Black cherry	270.3	30.1	68.2	134.9	37.1	93.5	23.7	19.9	37.5	12.4
Select white oaks	138.3	26.8	32.1	60.4	19.0	65.9	26.8	14.6	17.9	6.6
Chestnut oak	113.5	13.9	21.7	65.0	12.9	43.1	11.3	12.3	15.3	4.2
Northern red oak	689.5	163.4	201.9	261.2	63.0	368.4	152.0	108.4	82.7	25.3
Other oaks	31.4	2.9	2.3	18.1	8.1	5.1	2.9	.7	1.0	.5
Basswood	271.2	54.5	79.4	121.6	15.7	126.9	38.0	34.3	48.6	6.0
Elms	8.5	2.7	2.8	2.5	.5	7.2	2.7	2.8	1.4	.3
Other hardwoods	26.9	.0	1.7	17.7	7.5	14.1	.0	1.7	7.0	5.4
Total hardwoods	5,313.0	653.2	1,276.8	2,720.2	662.8	2,127.4	539.3	553.4	826.7	208.0
Percent of hardwood in each grade	100	12	24	51	13	100	25	26	39	10
Hardwood sampling error (in percent)	3.5	7	5	4	4	5	8	6	8	7

[a] International 1/4-inch rule.

[b] Grade 4 applies only to white pine. For hardwoods the volumes in this column are for construction logs.

[c] These species are not divided into standard-lumber grades.

Table 56.--Sampling errors for timber-volume classes, South-central Highlands Unit, New York, 1980

(In percent)

Item	Growing-stock volume (Table 53)	Sawtimber volume (Table 54)
Species		
Balsam fir	70	73
Spruces	46	51
Red pine	30	33
White pine	18	21
Hemlock	12	13
Other softwoods	35	44
Red maple	7	9
Sugar maple	8	9
Yellow birch	17	28
Sweet birch	15	24
Paper birch	32	35
Hickories	31	51
American beech	11	13
White ash	10	13
Aspens (populus)	15	20
Black cherry	16	18
Select white oaks	23	25
Chestnut oak	21	24
Northern red oak	13	13
Other oaks	48	42
Basswood	17	19
Elms	47	51
Other hardwoods	37	48
Dbh class (inches)		
5.0 to 6.9	6	-
7.0 to 8.9	4	-
9.0 to 10.9	4	16
11.0 to 12.9	4	5
13.0 to 14.9	4	4
15.0 to 16.9	6	5
17.0 to 18.9	9	8
19.0 to 20.9	10	10
21.0 to 28.9	11	11
29.0+	25	23

Table 57.--Area of commercial forest land by forest type, forest-type group, and stand-size class, St. Lawrence-Northern Adirondack Unit, New York, 1980

(In thousands of acres)

Forest type and forest-type group	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Jack pine	.0	.0	20.2	.0	20.2
Red pine	25.2	6.7	7.4	.0	39.3
White pine	13.6	13.3	18.0	5.7	50.6
Scotch pine	6.6	.0	.0	.0	6.6
White pine/hemlock	26.3	8.1	6.7	.0	41.1
Hemlock	25.2	7.4	.0	.0	32.6
White/red pine group	96.9	35.5	52.3	5.7	190.4
Balsam fir	7.3	5.3	.0	.0	12.6
Black spruce	5.3	.0	5.9	.0	11.2
Red spruce/balsam fir	58.2	91.6	31.9	.0	181.7
No. white-cedar	27.8	44.3	45.7	.0	117.8
Tamarack	.0	.0	6.7	.0	6.7
White spruce	5.9	5.9	5.9	.0	17.7
Spruce/fir group	104.5	147.1	96.1	.0	347.7
Pitch pine	7.3	.0	.0	.0	7.3
Hard pine group	7.3	.0	.0	.0	7.3
W.pine/n.r.o./w.ash	.0	7.3	.0	.0	7.3
Oak/pine group	.0	7.3	.0	.0	7.3
White oak	7.4	.0	.0	.0	7.4
Northern red oak	.0	6.7	.0	.0	6.7
W.oak/r.oak/hickory	7.5	.0	.0	6.5	14.0
Mixed cntrl hrdwoods	.0	.0	.0	6.0	6.0
Oak/hickory group	14.9	6.7	.0	12.5	34.1
Blk.ash/a.elm/r.mpl.	15.3	25.4	88.1	.0	128.8
Cottonwood	.0	.0	8.1	.0	8.1
Willow	.0	.0	41.0	19.6	60.6
Elm/ash/red maple group	15.3	25.4	137.2	19.6	197.5
Sgr.mpl./bch/y.birch	424.0	205.3	47.4	.0	676.7
Black cherry	51.7	13.1	55.2	.0	120.0
R.mpl./nrthrn hrdwds	186.7	261.3	96.9	.0	544.9
Pin chry/rvrt.field	.0	.0	40.0	39.0	79.0
Mixed nrthrn hrdwds	20.7	19.7	54.1	12.4	106.9
Northern hardwoods group	683.1	499.4	293.6	51.4	1,527.5
Aspen	33.7	61.0	106.3	7.4	208.4
Paper birch	.0	7.3	6.5	.0	13.8
Gray birch	.0	.0	64.4	.0	64.4
Aspen/birch group	33.7	68.3	177.2	7.4	286.6
Total, all groups	955.7	789.7	756.4	96.6	2,598.4

Table 58.--Net volume and weight of all live timber on commercial forest land by class of material and softwoods and hardwoods, St. Lawrence-Northern Adirondack Unit, New York, 1980

Class of material	Volume[a]			Weight[b]		
	Softwoods	Hardwoods	All species	Softwoods	Hardwoods	All species
	--------Million cubic feet-------			-----------Thousand tons------------		
Sawtimber trees:						
Sawlog portion	367.5	713.6	1,081.1	15,128.1	28,970.6	44,098.7
Upper stem	50.7	175.1	225.8	2,027.7	7,061.0	9,088.7
Total	418.2	888.7	1,306.9	17,155.8	36,031.6	53,187.4
Poletimber trees	257.1	837.7	1,094.8	8,704.5	33,086.6	41,791.1
All growing stock	675.3	1,726.4	2,401.7	25,860.3	69,118.2	94,978.5
Rough trees[c]	39.5	162.7	202.2	1,509.2	6,923.1	8,432.3
Rotten trees[c]	6.8	94.4	101.2	205.9	3,339.7	3,545.6
Saplings[d]	-	-	-	9,041.6	24,714.1	33,755.7
Stumps[e]	-	-	-	494.3	2,036.9	2,531.2
Tops - growing stock	-	-	-	9,413.4	24,267.2	33,680.6
Tops - rough and rotten	-	-	-	916.4	6,732.5	7,648.9
Total, all classes	721.6	1,983.5	2,705.1	47,441.1	137,131.7	184,572.8

[a] Excludes bark.

[b] Includes bark and sound cull; excludes rotten cull.

[c] Bole portion of trees 5.0 inches dbh and larger.

[d] Includes entire tree aboveground.

[e] Of all live trees 5.0 inches dbh and larger.

Table 59.--Net volume of growing stock on commercial forest land by species and diameter class, St. Lawrence-Northern Adirondack Unit, New York, 1980

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	27.1	40.5	28.9	14.9	4.3	.0	.7	.0	.0	.0	116.4
Spruces	38.5	46.2	37.7	25.6	19.0	8.3	1.9	1.9	1.2	.0	180.3
Red pine	8.4	15.8	34.3	16.9	11.7	4.6	.6	.0	.0	.0	92.3
White pine	8.5	11.2	13.5	14.6	8.1	10.1	11.5	3.8	17.1	2.7	101.1
Hemlock	6.8	12.2	9.8	9.7	10.6	9.0	13.2	11.5	9.5	2.1	94.4
Other softwoods	17.9	24.0	19.5	13.7	8.0	2.5	3.8	1.0	.4	.0	90.8
Total softwoods	107.2	149.9	143.7	95.4	61.7	34.5	31.7	18.2	28.2	4.8	675.3
Red maple	70.5	99.5	80.2	62.6	50.0	22.6	11.7	8.1	5.8	.0	411.0
Sugar maple	32.8	74.6	77.5	54.4	62.7	35.4	35.2	15.9	27.9	4.7	421.1
Yellow birch	8.4	16.9	17.1	19.8	11.5	14.7	8.5	5.2	9.0	1.1	112.2
Sweet birch	.0	.7	.5	.0	.0	.0	.0	.0	.0	.4	1.6
Paper birch	11.5	15.0	12.4	4.5	2.0	2.2	.6	.4	.0	.0	48.6
Hickories	1.3	5.3	1.7	3.7	.7	.0	.0	.0	.9	.0	13.6
American beech	16.1	24.3	30.0	33.2	28.2	17.8	11.9	13.4	9.1	.0	184.0
White ash	6.3	12.2	15.7	16.2	7.3	3.5	3.4	2.0	1.6	.0	68.2
Aspens (populus)	23.8	31.5	37.3	32.9	21.7	14.2	7.9	4.0	.3	.0	173.6
Black cherry	7.3	19.7	21.4	30.1	33.5	22.1	5.3	4.3	3.7	.9	148.3
Select white oaks	.2	1.2	1.1	.6	2.1	1.8	.9	.9	1.8	.5	11.1
Chestnut oak	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Northern red oak	2.1	3.8	7.4	4.0	3.4	1.9	2.7	1.2	.5	.0	27.0
Other oaks	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Basswood	2.3	7.2	3.3	3.7	4.4	4.2	7.2	2.0	4.7	.0	39.0
Elms	6.4	3.0	3.5	2.1	1.4	4.2	1.6	.5	.0	.0	22.7
Other hardwoods	3.3	13.3	8.1	3.5	4.7	4.0	3.6	.9	3.0	.0	44.4
Total hardwoods	192.3	328.2	317.2	271.3	233.6	148.6	100.5	58.8	68.3	7.6	1,726.4
All species	299.5	478.1	460.9	366.7	295.3	183.1	132.2	77.0	96.5	12.4	2,401.7

Table 60.--Net volume of sawtimber on commercial forest land by species and diameter class, St. Lawrence-Northern Adirondack Unit, New York, 1980

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	104.8	65.6	20.7	.0	3.8	.0	.0	.0	194.9
Spruces	122.4	104.5	86.8	37.8	9.2	9.5	7.0	.0	377.2
Red pine	114.7	68.4	55.4	24.7	3.3	.0	.0	.0	266.5
White pine	41.2	57.6	34.5	45.4	55.1	17.8	83.9	12.3	347.8
Hemlock	27.9	34.0	41.9	35.9	54.6	52.6	40.9	9.9	297.7
Other softwoods	57.5	50.0	32.9	10.3	16.1	3.8	2.0	.0	172.6
Total softwoods	468.5	380.1	272.2	154.1	142.1	83.7	133.8	22.2	1,656.7
Red maple	.0	226.8	195.0	94.1	52.5	36.7	25.6	.0	630.7
Sugar maple	.0	199.0	242.3	152.3	161.1	70.6	128.7	24.1	978.1
Yellow birch	.0	78.6	48.5	64.8	37.0	20.9	42.4	5.7	297.9
Sweet birch	.0	.0	.0	.0	.0	.0	.0	1.5	1.5
Paper birch	.0	18.6	9.3	9.3	2.0	1.8	.0	.0	41.0
Hickories	.0	16.0	3.0	.0	.0	.0	5.6	.0	24.6
American beech	.0	129.6	119.6	81.0	53.0	62.1	50.8	.0	496.1
White ash	.0	59.6	30.5	15.5	14.5	8.7	6.5	.0	135.3
Aspens (populus)	.0	142.5	98.8	68.7	37.5	20.0	1.6	.0	369.1
Black cherry	.0	117.0	141.2	96.7	25.4	21.1	17.2	6.4	425.0
Select white oaks	.0	2.6	9.5	8.7	3.8	3.2	8.0	2.3	38.1
Chestnut oak	.0	.0	.0	.0	.0	.0	.0	.0	.0
Northern red oak	.0	16.9	13.6	9.6	13.7	5.8	2.1	.0	61.7
Other oaks	.0	.0	.0	.0	.0	.0	.0	.0	.0
Basswood	.0	13.7	19.6	19.9	32.9	9.7	22.2	.0	118.0
Elms	.0	8.3	6.9	21.7	6.6	2.7	.0	.0	46.2
Other hardwoods	.0	10.5	20.1	15.5	14.0	4.8	9.9	.0	74.8
Total hardwoods	.0	1,039.7	957.9	657.8	454.0	268.1	320.6	40.0	3,738.1
All species	468.5	1,419.8	1,230.1	811.9	596.1	351.8	454.4	62.2	5,394.8

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[a] International 1/4-inch rule.

Table 61.--Net volume of sawtimber on commercial forest land by species, size class, and standard-lumber log grade, St. Lawrence-Northern Adirondack Unit, New York, 1980

(In millions of board feet)[a]

Species	All grades	All size classes				>15" Diameter at breast height				
		Grade 1	Grade 2	Grade 3	Grade 4[b]	All grades	Grade 1	Grade 2	Grade 3	Grade 4[b]
Balsam fir[c]	194.9	.0	.0	.0	.0	.0	.0	.0	.0	.0
Spruces[c]	377.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
Red pine	266.5	5.7	4.8	256.0	.0	28.0	.0	.0	28.0	.0
White pine	347.8	31.2	75.9	156.2	84.5	214.5	29.3	39.2	88.8	57.2
Hemlock[c]	297.7	.0	.0	.0	.0	.0	.0	.0	.0	.0
Other softwoods[c]	172.6	.0	.0	.0	.0	.0	.0	.0	.0	.0
Total softwoods	1,656.7	36.9	80.7	412.2	84.5	242.5	29.3	39.2	116.8	57.2
Red maple	630.7	31.8	117.4	390.1	91.4	209.0	26.3	55.4	103.2	24.1
Sugar maple	978.1	162.5	267.6	435.6	112.4	536.8	142.0	155.7	184.6	54.5
Yellow birch	297.9	36.4	80.2	161.9	19.4	170.8	29.7	50.4	81.7	9.0
Sweet birch	1.5	.0	1.1	.4	.0	1.5	.0	1.1	.4	.0
Paper birch	41.0	2.9	9.3	21.8	7.0	13.1	1.4	5.5	5.0	1.2
Hickories	24.6	3.8	3.1	8.2	9.5	5.6	2.5	1.0	1.0	1.1
American beech	496.1	29.0	69.1	330.7	67.3	247.0	25.6	43.5	147.8	30.1
White ash	135.3	31.6	40.9	48.2	14.6	45.1	19.9	12.0	11.3	1.9
Aspens (populus)	369.1	26.4	94.5	204.4	43.8	127.8	26.4	43.6	50.4	7.4
Black cherry	425.0	59.2	80.6	229.2	56.0	166.7	42.1	36.0	69.5	19.1
Select white oaks	38.1	1.0	7.1	15.2	14.8	26.0	1.0	5.3	7.1	12.6
Chestnut oak	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Northern red oak	61.7	15.0	12.8	27.8	6.1	31.2	13.4	5.3	9.7	2.8
Other oaks	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Basswood	118.0	33.3	29.3	49.8	5.6	84.8	32.0	20.9	28.0	3.9
Elms	46.2	14.5	11.6	16.6	3.5	31.0	13.1	9.6	6.7	1.6
Other hardwoods	74.8	6.5	26.2	34.8	7.3	44.2	6.5	15.7	19.3	2.7
Total hardwoods	3,738.1	453.9	850.8	1,974.7	458.7	1,740.6	381.9	461.0	725.7	172.0
Percent of hardwood in each grade	100	12	23	53	12	100	22	26	42	10
Hardwood sampling error (in percent)	4.8	9	6	4	6	6	11	8	6	10

[a] International 1/4-inch rule.

[b] Grade 4 applies only to white pine. For hardwoods the volumes in this column are for construction logs.

[c] These species are not divided into standard-lumber grades.

Table 62.--Sampling errors for timber-volume classes, St. Lawrence-Northern Adirondack Unit, New York, 1980

(In percent)

Item	Growing-stock volume (Table 59)	Sawtimber volume (Table 60)
Species		
Balsam fir	18	22
Spruces	13	15
Red pine	41	42
White pine	16	18
Hemlock	18	19
Other softwoods	19	26
Red maple	8	12
Sugar maple	10	13
Yellow birch	12	14
Sweet birch	56	100
Paper birch	20	29
Hickories	39	52
American beech	13	13
White ash	16	22
Aspens (populus)	12	18
Black cherry	17	20
Select white oaks	37	43
Chestnut oak	0	0
Northern red oak	29	33
Other oaks	0	0
Basswood	21	23
Elms	20	30
Other hardwoods	46	52
Dbh class (inches)		
5.0 to 6.9	6	-
7.0 to 8.9	5	-
9.0 to 10.9	5	16
11.0 to 12.9	5	5
13.0 to 14.9	6	5
15.0 to 16.9	7	7
17.0 to 18.9	10	9
19.0 to 20.9	9	9
21.0 to 28.9	11	11
29.0+	25	26

Table 63.--Area of commercial forest land by forest type, forest-type group, and stand-size class, Western Adirondack Unit, New York, 1980

(In thousands of acres)

Forest type and forest-type group	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Red pine	5.4	.0	5.5	.0	10.9
White pine	37.1	16.8	5.5	.0	59.4
Scotch pine	5.4	.0	.0	.0	5.4
White pine/hemlock	5.5	6.7	5.9	.0	18.1
Hemlock	43.3	11.7	.0	.0	55.0
White/red pine group	96.7	35.2	16.9	.0	148.8
Balsam fir	.0	5.7	5.6	.0	11.3
Red spruce/balsam fir	44.2	11.2	11.3	.0	66.7
White spruce	.0	.0	17.3	.0	17.3
Spruce/fir group	44.2	16.9	34.2	.0	95.3
Northern red oak	13.7	.0	.0	.0	13.7
W.oak/r.oak/hickory	5.8	.0	.0	.0	5.8
Mixed central hardwoods	.0	6.9	.0	.0	6.9
Oak/hickory group	19.5	6.9	.0	.0	26.4
Blk.ash/A.elm/r.maple	.0	20.5	33.0	.0	53.5
Willow	.0	.0	7.0	19.4	26.4
Elm/ash/red maple group	.0	20.5	40.0	19.4	79.9
Sugar maple/beech/y.birch	337.3	142.4	63.4	.0	543.1
Black cherry	12.0	25.1	78.9	.0	116.0
R.maple/nrthrn hardwoods	190.0	91.8	58.2	.0	340.0
Pin cherry/rvrt.field	.0	.0	40.5	25.2	65.7
Mixed northern hardwoods	24.8	13.2	21.5	.0	59.5
Northern hardwoods group	564.1	272.5	262.5	25.2	1,124.3
Aspen	12.7	29.3	31.4	.0	73.4
Gray birch	.0	.0	6.7	.0	6.7
Aspen/birch group	12.7	29.3	38.1	.0	80.1
Total, all groups	737.2	381.3	391.7	44.6	1,554.8

Table 64.--Net volume and weight of all live timber on commercial forest land by class of material and softwoods and hardwoods, Western Adirondack Unit, New York, 1980

Class of material	Volume[a]			Weight[b]		
	Softwoods	Hardwoods	All species	Softwoods	Hardwoods	All species
	--------Million cubic feet-------			-----------Thousand tons-----------		
Sawtimber trees:						
Sawlog portion	246.7	438.1	684.8	10,793.7	19,424.7	30,218.4
Upper stem	32.5	105.9	138.4	1,379.6	4,654.6	6,034.2
Total	279.2	544.0	823.2	12,173.3	24,079.3	36,252.6
Poletimber trees	94.4	433.1	527.5	3,028.8	17,703.9	20,732.7
All growing stock	373.6	977.1	1,350.7	15,202.1	41,783.2	56,985.3
Rough trees[c]	36.7	96.7	133.4	1,719.6	4,374.3	6,093.9
Rotten trees[c]	3.5	91.7	95.2	113.8	3,052.2	3,166.0
Saplings[d]	-	-	-	3,168.6	12,883.7	16,052.3
Stumps[e]	-	-	-	350.6	1,359.9	1,710.5
Tops - growing stock	-	-	-	5,563.8	14,035.8	19,599.6
Tops - rough and rotten	-	-	-	903.3	4,995.3	5,898.6
Total, all classes	413.8	1,165.5	1,579.3	27,021.8	82,484.4	109,506.2

[a] Excludes bark.

[b] Includes bark and sound cull; excludes rotten cull.

[c] Bole portion of trees 5.0 inches dbh and larger.

[d] Includes entire tree aboveground.

[e] Of all live trees 5.0 inches dbh and larger.

Table 65.--Net volume of growing stock on commercial forest land by species and diameter class, Western Adirondack Unit, New York, 1980

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	8.2	7.4	4.2	1.8	.0	.0	.4	.0	.0	.0	22.0
Spruces	13.2	18.0	22.2	15.4	7.9	10.4	2.4	2.3	.0	.0	91.8
Red pine	.6	1.8	2.9	7.1	1.5	.4	.0	.0	.0	.0	14.3
White pine	4.9	9.4	13.0	11.9	13.1	7.6	8.2	2.2	7.5	.4	78.2
Hemlock	9.0	16.2	25.6	28.4	20.4	17.0	13.9	9.5	10.5	1.4	151.9
Other softwoods	2.9	2.8	5.4	1.9	2.0	.4	.0	.0	.0	.0	15.4
Total softwoods	38.8	55.6	73.3	66.5	44.9	35.8	24.9	14.0	18.0	1.8	373.6
Red maple	25.4	43.1	57.3	42.9	34.5	22.7	14.9	7.9	13.0	.0	261.7
Sugar maple	17.3	24.8	43.3	32.4	26.6	17.6	11.7	7.6	10.7	1.8	193.8
Yellow birch	9.2	14.1	15.4	14.8	15.4	11.8	8.6	2.9	4.0	2.5	98.7
Sweet birch	.0	.4	.0	.0	.0	.0	.0	.0	.0	.0	.4
Paper birch	.0	.7	.6	.0	.0	.0	.0	.0	.0	.0	1.3
Hickories	.0	1.4	3.1	1.7	1.4	2.0	.5	.5	.9	.0	11.5
American beech	11.7	16.0	21.4	19.3	18.6	16.1	10.5	6.1	3.6	.0	123.3
White ash	5.0	11.2	16.4	14.6	7.0	8.2	3.8	3.4	1.4	.6	71.6
Aspens (populus)	8.8	12.8	11.3	5.8	4.5	1.3	.5	.5	.4	.3	46.2
Black cherry	7.8	13.5	17.4	14.4	21.0	13.2	7.1	5.4	3.4	.5	103.7
Select white oaks	.0	.0	.0	.4	.4	.0	.0	.0	.0	.0	.8
Chestnut oak	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Northern red oak	.7	1.3	1.3	1.9	1.5	1.0	2.0	.9	1.4	.2	12.2
Other oaks	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Basswood	.4	.9	2.6	4.7	5.8	1.4	2.8	1.0	1.4	.5	21.5
Elms	1.1	1.4	2.3	1.1	1.3	.5	1.4	.0	.6	.0	9.7
Other hardwoods	5.7	3.1	2.9	1.9	1.6	3.7	.9	.9	.0	.0	20.7
Total hardwoods	93.1	144.7	195.3	155.9	139.6	99.5	64.7	37.1	40.8	6.4	977.1
All species	131.9	200.3	268.6	222.4	184.5	135.3	89.6	51.1	58.8	8.2	1,350.7

Table 66.--Net volume of sawtimber on commercial forest land by species and diameter class, Western Adirondack Unit, New York, 1980

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	9.0–10.9	11.0–12.9	13.0–14.9	15.0–16.9	17.0–18.9	19.0–20.9	21.0–28.9	29+	
Balsam fir	15.2	7.8	.0	.0	2.0	.0	.0	.0	25.0
Spruces	75.7	63.3	35.8	47.3	11.6	10.8	.0	.0	244.5
Red pine	9.3	27.3	6.1	1.5	.0	.0	.0	.0	44.2
White pine	38.1	45.5	52.0	31.1	35.9	10.3	33.9	1.6	248.4
Hemlock	77.9	105.0	79.9	67.7	55.9	39.7	42.0	5.3	473.4
Other softwoods	15.0	6.4	6.4	1.1	.0	.0	.0	.0	28.9
Total softwoods	231.2	255.3	180.2	148.7	105.4	60.8	75.9	6.9	1,064.4
Red maple	.0	162.8	128.9	95.0	64.9	31.7	60.2	.0	543.5
Sugar maple	.0	122.8	104.0	74.7	46.7	32.1	50.2	9.0	439.5
Yellow birch	.0	60.0	62.1	47.5	36.7	12.7	18.3	12.9	250.2
Sweet birch	.0	.0	.0	.0	.0	.0	.0	.0	.0
Paper birch	.0	.0	.0	.0	.0	.0	.0	.0	.0
Hickories	.0	6.5	6.2	8.7	2.1	1.1	4.6	.0	29.2
American beech	.0	77.4	81.2	70.4	43.7	30.1	18.7	.0	321.5
White ash	.0	58.6	26.7	36.6	16.5	15.2	7.7	2.6	163.9
Aspens (populus)	.0	23.1	17.4	5.2	1.6	1.8	1.8	1.5	52.4
Black cherry	.0	56.0	84.3	54.8	32.7	23.7	14.4	2.9	268.8
Select white oaks	.0	1.8	1.5	.0	.0	.0	.0	.0	3.3
Chestnut oak	.0	.0	.0	.0	.0	.0	.0	.0	.0
Northern red oak	.0	6.9	6.0	5.0	8.5	4.3	5.8	1.0	37.5
Other oaks	.0	.0	.0	.0	.0	.0	.0	.0	.0
Basswood	.0	16.5	25.9	6.3	13.5	4.5	7.2	1.5	75.4
Elms	.0	4.6	4.8	2.8	5.8	.0	2.6	.0	20.6
Other hardwoods	.0	6.5	6.2	13.3	3.8	4.3	.0	.0	34.1
Total hardwoods	.0	603.5	555.2	420.3	276.5	161.5	191.5	31.4	2,239.9
All species	231.2	858.8	735.4	569.0	381.9	222.3	267.4	38.3	3,304.3

[a] International 1/4-inch rule.

Table 67.--Net volume of sawtimber on commercial forest land by species, size class, and standard-lumber log grade, Western Adirondack Unit, New York, 1980

(In millions of board feet)[a]

Species	All grades	All size classes				>15" Diameter at breast height				
		Grade 1	Grade 2	Grade 3	Grade 4[b]	All grades	Grade 1	Grade 2	Grade 3	Grade 4[b]
Balsam fir[c]	25.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Spruces[c]	244.5	.0	.0	.0	.0	.0	.0	.0	.0	.0
Red pine	44.2	8.0	5.8	30.4	.0	1.5	.0	.0	1.5	.0
White pine	248.4	2.9	27.3	113.2	105.0	112.8	2.9	9.1	45.2	55.6
Hemlock[c]	473.4	.0	.0	.0	.0	.0	.0	.0	.0	.0
Other softwoods[c]	28.9	.0	.0	.0	.0	.0	.0	.0	.0	.0
Total softwoods	1,064.4	10.9	33.1	143.6	105.0	114.3	2.9	9.1	46.7	55.6
Red maple	543.5	26.7	63.6	352.3	100.9	251.9	25.2	49.6	142.1	35.0
Sugar maple	439.5	68.6	78.0	223.0	69.9	212.7	59.7	44.4	78.0	30.6
Yellow birch	250.2	34.4	60.9	128.2	26.7	128.1	29.9	35.1	52.5	10.6
Sweet birch	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Paper birch	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Hickories	29.2	7.8	6.6	8.3	6.5	16.5	6.0	2.5	4.6	3.4
American beech	321.5	8.0	22.7	187.2	103.6	162.9	6.6	12.2	99.2	44.9
White ash	163.9	29.8	47.3	63.9	22.9	78.5	24.8	27.0	21.4	5.3
Aspens (populus)	52.4	1.1	6.8	34.0	10.5	11.9	1.1	.4	7.9	2.5
Black cherry	268.8	35.8	55.4	139.4	38.2	128.5	28.6	21.5	62.0	16.4
Select white oaks	3.3	.0	.0	2.7	.6	.0	.0	.0	.0	.0
Chestnut oak	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Northern red oak	37.5	16.0	9.7	9.4	2.4	24.7	14.9	4.2	4.3	1.3
Other oaks	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Basswood	75.4	9.9	21.8	39.3	4.4	32.8	8.7	9.3	13.0	1.8
Elms	20.6	4.4	2.8	10.3	3.1	11.2	4.4	1.5	4.4	.9
Other hardwoods	34.1	4.4	6.9	17.7	5.1	21.5	4.4	3.7	9.9	3.5
Total hardwoods	2,239.9	246.9	382.5	1,215.7	394.8	1,081.2	214.3	211.4	499.3	156.2
Percent of hardwood in each grade	100	11	17	54	18	100	20	20	46	14
Hardwood sampling error (in percent)	5.9	11	8	5	7	8	13	11	8	11

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[a] International 1/4-inch rule.

[b] Grade 4 applies only to white pine. For hardwoods the volumes in this column are for construction logs.

[c] These species are not divided into standard-lumber grades.

Table 68.--Sampling errors for timber-volume classes, Western Adirondack Unit, New York, 1980

(In percent)

Item	Growing-stock volume (Table 65)	Sawtimber volume (Table 66)
Species		
Balsam fir	29	40
Spruces	17	21
Red pine	44	50
White pine	34	39
Hemlock	15	17
Other softwoods	49	58
Red maple	9	11
Sugar maple	11	14
Yellow birch	11	13
Sweet birch	99	0
Paper birch	71	0
Hickories	34	36
American beech	14	16
White ash	15	19
Aspens (populus)	21	31
Black cherry	13	15
Select white oaks	101	102
Chestnut oak	0	0
Northern red oak	42	45
Other oaks	0	0
Basswood	25	26
Elms	26	41
Other hardwoods	34	39
Dbh class (inches)		
5.0 to 6.9	7	-
7.0 to 8.9	6	-
9.0 to 10.9	5	13
11.0 to 12.9	5	6
13.0 to 14.9	6	6
15.0 to 16.9	7	7
17.0 to 18.9	10	9
19.0 to 20.9	11	10
21.0 to 28.9	12	13
29.0+	26	27

Table 69.--Area of commercial forest land by forest type, forest-type group, and stand-size class, Eastern Adirondack Unit, New York, 1980

(In thousands of acres)

Forest type and forest-type group	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Jack pine	.0	.0	5.9	.0	5.9
White pine	125.1	40.5	.0	.0	165.6
White pine/hemlock	42.0	11.7	7.3	.0	61.0
Hemlock	27.4	5.0	.0	.0	32.4
White/red pine group	194.5	57.2	13.2	.0	264.9
Balsam fir	6.0	11.2	.0	.0	17.2
Black spruce	.0	6.0	.0	.0	6.0
Red spruce/balsam fir	62.3	26.1	25.4	.0	113.8
No. white-cedar	16.3	.0	.0		16.3
Tamarack	.0	.0	4.8	.0	4.8
Spruce/fir group	84.6	43.3	30.2	.0	158.1
W.pine/n.r.o./w.ash	5.2	5.7	.0	.0	10.9
Oak/pine group	5.2	5.7	.0	.0	10.9
Chestnut oak	.0	5.0	.0	.0	5.0
White oak	.0	.0	6.0	.0	6.0
Northern red oak	6.0	12.5	.0	.0	18.5
W.oak/r.oak/hickory	.0	11.1	.0	.0	11.1
Oak/hickory group	6.0	28.6	6.0	.0	40.6
Blk.ash/a.elm/r.mpl.	.0	9.1	11.3	.0	20.4
Elm/ash/red maple group	.0	9.1	11.3	.0	20.4
Sgr.mpl./bch/y.birch	321.4	219.9	56.6	.0	597.9
Black cherry	.0	.0	9.1	.0	9.1
R.mpl./nrthrn hrdwds	18.2	25.2	5.6	.0	49.0
Mixed nrthrn hrdwds	.0	5.5	24.7	.0	30.2
Northern hardwoods group	339.6	250.6	96.0	.0	686.2
Aspen	13.2	12.0	21.4	.0	46.6
Paper birch	12.5	22.4	5.4	.0	40.3
Aspen/birch group	25.7	34.4	26.8	.0	86.9
Total, all groups	655.6	428.9	183.5	.0	1,268.0

Table 70.--Net volume and weight of all live timber on commercial forest land by class of material and softwoods and hardwoods, Eastern Adirondack Unit, New York, 1980

Class of material	Volume[a]			Weight[b]		
	Softwoods	Hardwoods	All species	Softwoods	Hardwoods	All species
	--------Million cubic feet-------			-----------Thousand tons------------		
Sawtimber trees:						
Sawlog portion	447.3	389.3	836.6	20,636.5	16,674.3	37,310.8
Upper stem	54.2	93.8	148.0	2,414.2	3,990.5	6,404.7
Total	501.5	483.1	984.6	23,050.7	20,664.8	43,715.5
Poletimber trees	182.1	370.6	552.7	5,940.7	15,472.0	21,412.7
All growing stock	683.6	853.7	1,537.3	28,991.4	36,136.8	65,128.2
Rough trees[c]	29.8	49.8	79.6	1,323.2	2,222.3	3,545.5
Rotten trees[c]	6.8	40.4	47.2	182.6	1,472.1	1,654.7
Saplings[d]	-	-	-	6,521.8	10,648.5	17,170.3
Stumps[e]	-	-	-	495.0	1,081.2	1,576.2
Tops - growing stock	-	-	-	8,859.4	12,264.0	21,123.4
Tops - rough and rotten	-	-	-	757.4	3,184.2	3,941.6
Total, all classes	720.2	943.9	1,664.1	47,130.8	67,009.1	114,139.9

[a] Excludes bark.

[b] Includes bark and sound cull; excludes rotten cull.

[c] Bole portion of trees 5.0 inches dbh and larger.

[d] Includes entire tree aboveground.

[e] Of all live trees 5.0 inches dbh and larger.

Table 71.--Net volume of growing stock on commercial forest land by species and diameter class, Eastern Adirondack Unit, New York, 1980

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	12.4	16.5	12.9	4.4	4.3	.5	.0	.0	.0	.0	51.0
Spruces	27.6	25.0	18.3	17.8	12.2	8.4	5.4	2.0	3.3	.0	120.0
Red pine	1.0	3.2	4.0	6.2	3.7	1.3	.0	.0	.0	.0	19.4
White pine	23.4	34.9	36.1	39.2	40.8	38.9	27.3	20.6	33.0	3.8	298.0
Hemlock	8.5	19.0	23.8	23.9	16.2	19.1	21.3	17.2	18.0	.0	167.0
Other softwoods	4.7	5.9	4.2	5.5	3.6	2.0	.0	.8	1.5	.0	28.2
Total softwoods	77.6	104.5	99.3	97.0	80.8	70.2	54.0	40.6	55.8	3.8	683.6
Red maple	11.7	17.4	16.4	14.1	6.4	7.4	4.2	2.7	1.8	.0	82.1
Sugar maple	13.5	34.2	41.3	38.8	27.8	31.9	21.2	11.8	23.7	4.7	248.9
Yellow birch	4.1	7.4	12.7	17.7	14.9	16.6	9.5	9.3	22.0	8.6	122.8
Sweet birch	1.1	1.7	.8	.0	.9	.4	.0	.0	.0	.0	4.9
Paper birch	10.6	17.8	19.6	14.3	11.4	4.5	.5	.3	.3	.0	79.3
Hickories	.6	.5	.8	1.0	.5	.0	.0	.0	.0	.0	3.4
American beech	13.3	20.2	31.0	23.6	12.7	9.1	6.8	.8	1.6	.0	119.1
White ash	3.8	3.9	4.3	4.3	1.4	1.3	1.4	.0	.0	.0	20.4
Aspens (populus)	6.8	12.3	18.3	10.0	7.9	8.1	1.9	.9	.4	.0	66.6
Black cherry	.8	.9	1.6	1.8	2.4	1.3	.4	.9	.0	.4	10.5
Select white oaks	.0	.6	.7	1.7	.0	.7	.0	.0	.3	.0	4.0
Chestnut oak	.4	.7	.4	.6	1.1	.0	.0	.0	.0	.0	3.2
Northern red oak	3.3	12.6	12.0	10.0	10.7	8.9	2.1	1.1	2.6	.0	63.3
Other oaks	.2	.0	.2	.0	.0	.0	.0	.0	.0	.0	.4
Basswood	.8	1.5	1.3	4.0	2.2	.5	.5	.4	1.4	.7	13.3
Elms	1.3	.9	.3	.5	1.6	.8	.5	.0	.3	.0	6.2
Other hardwoods	2.6	.9	.5	1.3	.0	.0	.0	.0	.0	.0	5.3
Total hardwoods	74.9	133.5	162.2	143.7	101.9	91.5	49.0	28.2	54.4	14.4	853.7
All species	152.5	238.0	261.5	240.7	182.7	161.7	103.0	68.8	110.2	18.2	1,537.3

Table 72.--Net volume of sawtimber on commercial forest land by species and diameter class, Eastern Adirondack Unit, New York, 1980

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	47.2	18.8	20.4	2.5	.0	.0	.0	.0	88.9
Spruces	66.0	78.0	54.0	39.0	26.7	11.3	19.5	.0	294.5
Red pine	12.3	24.0	16.5	5.6	.0	.0	.0	.0	58.4
White pine	114.5	151.4	176.8	178.9	130.2	100.0	173.1	20.6	1,045.5
Hemlock	73.8	91.0	65.2	81.3	92.7	78.1	81.5	.0	563.6
Other softwoods	9.8	16.5	11.9	6.7	.0	3.0	6.4	.0	54.3
Total softwoods	323.6	379.7	344.8	314.0	249.6	192.4	280.5	20.6	2,105.2
Red maple	.0	56.9	28.8	32.7	16.5	13.6	8.8	.0	157.3
Sugar maple	.0	160.5	123.8	148.7	101.3	60.2	121.1	26.3	741.9
Yellow birch	.0	74.0	69.0	77.1	45.3	43.7	113.3	45.3	467.7
Sweet birch	.0	.0	3.6	1.7	.0	.0	.0	.0	5.3
Paper birch	.0	58.9	49.8	20.5	1.8	1.5	1.5	.0	134.0
Hickories	.0	4.3	2.1	.0	.0	.0	.0	.0	6.4
American beech	.0	101.2	59.6	45.9	36.0	3.2	7.1	.0	253.0
White ash	.0	18.7	6.5	5.9	4.9	.0	.0	.0	36.0
Aspens (populus)	.0	43.8	35.6	39.8	8.7	4.8	2.8	.0	135.5
Black cherry	.0	5.8	10.6	5.2	2.0	3.0	.0	2.2	28.8
Select white oaks	.0	6.6	.0	3.3	.0	.0	1.5	.0	11.4
Chestnut oak	.0	2.2	4.2	.0	.0	.0	.0	.0	6.4
Northern red oak	.0	39.1	45.6	40.9	9.0	4.5	13.6	.0	152.7
Other oaks	.0	.0	.0	.0	.0	.0	.0	.0	.0
Basswood	.0	15.4	10.0	2.3	2.3	2.2	7.8	3.8	43.8
Elms	.0	1.9	6.7	3.4	2.0	.0	1.4	.0	15.4
Other hardwoods	.0	6.2	.0	.0	.0	.0	.0	.0	6.2
Total hardwoods	.0	595.5	455.9	427.4	229.8	136.7	278.9	77.6	2,201.8
All species	323.6	975.2	800.7	741.4	479.4	329.1	559.4	98.2	4,307.0

[a] International 1/4-inch rule.

Table 73.--Net volume of sawtimber on commercial forest land by species, size class, and standard-lumber log grade, Eastern Adirondack Unit, New York, 1980

(In millions of board feet)[a]

Species	All grades	All size classes				>15" Diameter at breast height				
		Grade 1	Grade 2	Grade 3	Grade 4[b]	All grades	Grade 1	Grade 2	Grade 3	Grade 4[b]
Balsam fir[c]	88.9	.0	.0	.0	.0	.0	.0	.0	.0	.0
Spruces[c]	294.5	.0	.0	.0	.0	.0	.0	.0	.0	.0
Red pine	58.4	9.1	5.7	43.6	.0	5.7	2.1	.3	3.3	.0
White pine	1,045.5	55.0	237.4	497.8	255.3	602.8	50.6	143.0	266.9	142.3
Hemlock[c]	563.6	.0	.0	.0	.0	.0	.0	.0	.0	.0
Other softwoods[c]	54.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
Total softwoods	2,105.2	64.1	243.1	541.4	255.3	608.5	52.7	143.3	270.2	142.3
Red maple	157.3	10.9	30.0	80.3	36.1	71.5	10.9	15.5	31.2	13.9
Sugar maple	741.9	174.3	175.0	312.8	79.8	457.6	159.6	115.6	140.1	42.3
Yellow birch	467.7	97.8	113.7	225.5	30.7	324.7	91.3	74.6	138.4	20.4
Sweet birch	5.3	.0	2.8	.8	1.7	1.7	.0	1.3	.3	.1
Paper birch	134.0	11.3	28.4	79.7	14.6	25.3	6.9	3.7	12.4	2.3
Hickories	6.4	.0	1.2	4.1	1.1	.0	.0	.0	.0	.0
American beech	253.0	4.8	30.3	146.7	71.2	92.2	2.8	13.8	46.5	29.1
White ash	36.0	7.2	7.1	15.2	6.5	10.8	4.1	2.4	3.5	.8
Aspens (populus)	135.5	15.6	34.6	68.4	16.9	56.2	14.2	21.3	17.2	3.5
Black cherry	28.8	2.5	7.9	13.9	4.5	12.4	2.5	1.6	7.3	1.0
Select white oaks	11.4	2.3	.3	5.2	3.6	4.8	2.3	.3	.6	1.6
Chestnut oak	6.4	.0	.0	4.6	1.8	.0	.0	.0	.0	.0
Northern red oak	152.7	28.2	55.1	56.8	12.6	68.0	27.9	18.6	17.4	4.1
Other oaks	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Basswood	43.8	8.7	15.6	17.3	2.2	18.5	7.4	3.4	6.8	.9
Elms	15.4	1.2	4.5	7.1	2.6	6.7	1.2	.4	4.5	.6
Other hardwoods	6.2	.0	.0	5.0	1.2	.0	.0	.0	.0	.0
Total hardwoods	2,201.8	364.8	506.5	1,043.4	287.1	1,150.4	331.1	272.5	426.2	120.6
Percent of hardwood in each grade	100	17	23	47	13	100	29	24	37	10
Hardwood sampling error (in percent)	7.5	13	8	7	8	10	14	11	10	13

[a] International 1/4-inch rule.

[b] Grade 4 applies only to white pine. For hardwoods the volumes in this column are for construction logs.

[c] These species are not divided into standard-lumber grades.

Table 74.--Sampling errors for timber-volume classes, Eastern Adirondack Unit, New York, 1980

(In percent)

Item	Growing-stock volume (Table 71)	Sawtimber volume (Table 72)
Species		
Balsam fir	21	28
Spruces	14	18
Red pine	33	38
White pine	11	13
Hemlock	16	17
Other softwoods	26	31
Red maple	15	18
Sugar maple	11	14
Yellow birch	13	14
Sweet birch	48	58
Paper birch	15	20
Hickories	58	80
American beech	12	16
White ash	21	35
Aspens (populus)	20	30
Black cherry	23	30
Select white oaks	49	43
Chestnut oak	72	86
Northern red oak	19	22
Other oaks	102	0
Basswood	34	39
Elms	36	49
Other hardwoods	53	80
Dbh class (inches)		
5.0 to 6.9	8	-
7.0 to 8.9	6	-
9.0 to 10.9	6	11
11.0 to 12.9	6	8
13.0 to 14.9	7	8
15.0 to 16.9	7	7
17.0 to 18.9	9	8
19.0 to 20.9	11	11
21.0 to 28.9	13	13
29.0+	24	24

Table 75.--Area of commercial forest land by forest type, forest-type group, and stand-size class, Capitol District Unit, New York, 1980

(In thousands of acres)

Forest type and forest-type group	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Red pine	.0	.0	6.1	.0	6.1
White pine	78.9	53.3	12.1	.0	144.3
White pine/Hemlock	78.6	6.5	.0	.0	85.1
Hemlock	41.3	12.5	.0	.0	53.8
White/red pine group	198.8	72.3	18.2	.0	289.3
Norway spruce	.0	6.3	.0	.0	6.3
Spruce/fir group	.0	6.3	.0	.0	6.3
Eastern redcedar	.0	.0	5.7	.0	5.7
Hard pine group	.0	.0	5.7	.0	5.7
W.pine/n.r.o./w.ash	.0	6.1	11.8	.0	17.9
Oak/pine group	.0	6.1	11.8	.0	17.9
Post,blk,or bear oak	.0	5.8	.0	.0	5.8
Chestnut oak	18.7	32.1	6.4	.0	57.2
White oak	5.9	.0	.0	.0	5.9
Northern red oak	42.5	25.1	.0	.0	67.6
W.oak/r.oak/hickory	13.1	25.3	6.4	.0	44.8
Black locust	.0	5.2	.0	.0	5.2
Black walnut	6.6	.0	.0	.0	6.6
Hawthorn/revrt.field	6.3	.0	6.9	.0	13.2
R.maple/central hdwd	5.9	19.8	.0	.0	25.7
Mixed cntrl hrdwoods	5.5	.0	.0	.0	5.5
Oak/hickory group	104.5	113.3	19.7	.0	237.5
Blk.ash/a.elm/r.mpl.	6.6	37.1	17.8	.0	61.5
Cottonwood	.0	.0	5.6	.0	5.6
Willow	.0	.0	13.2	5.5	18.7
Elm/ash/red maple group	6.6	37.1	36.6	5.5	85.8
Sgr.mpl./bch/y.birch	155.3	96.6	40.1	.0	292.0
Black cherry	24.2	13.1	11.4	.0	48.7
R.mpl./nrthrn hrdwds	53.4	48.5	41.2	.0	143.1
Pin chry/rvrt.field	7.0	10.9	6.1	6.2	30.2
Mixed nrthrn hrdwds	24.6	31.8	82.7	.0	139.1
Northern hardwoods group	264.5	200.9	181.5	6.2	653.1
Aspen	5.9	35.9	35.3	5.5	82.6
Paper birch	.0	6.2	.0	.0	6.2
Gray birch	.0	5.2	5.2	.0	10.4
Aspen/birch group	5.9	47.3	40.5	5.5	99.2
All groups	580.3	483.3	314.0	17.2	1,394.8

Table 76.--Net volume and weight of all live timber on commercial forest land by class of material and softwoods and hardwoods, Capitol District Unit, New York, 1980

Class of material	Volume[a]			Weight[b]		
	Softwoods	Hardwoods	All species	Softwoods	Hardwoods	All species
	--------Million cubic feet-------			-----------Thousand tons------------		
Sawtimber trees:						
Sawlog portion	346.8	416.0	762.8	14,950.0	17,603.4	32,553.4
Upper stem	43.4	103.1	146.5	1,835.6	4,322.7	6,158.3
Total	390.2	519.1	909.3	16,785.6	21,926.1	38,711.7
Poletimber trees	127.4	518.4	645.8	4,311.6	20,603.0	24,914.6
All growing stock	517.6	1,037.5	1,555.1	21,097.2	42,529.1	63,626.3
Rough trees[c]	51.5	78.6	130.1	2,322.9	3,260.9	5,583.8
Rotten trees[c]	4.1	37.9	42.0	142.7	1,251.8	1,394.5
Saplings[d]	-	-	-	2,845.8	11,209.4	14,055.2
Stumps[e]	-	-	-	406.8	1,105.7	1,512.5
Tops - growing stock	-	-	-	6,149.7	13,797.9	19,947.6
Tops - rough and rotten	-	-	-	815.7	2,842.8	3,658.5
Total, all classes	573.2	1,154.0	1,727.2	33,780.8	75,997.6	109,778.4

[a] Excludes bark.

[b] Includes bark and sound cull; excludes rotten cull.

[c] Bole portion of trees 5.0 inches dbh and larger.

[d] Includes entire tree aboveground.

[e] Of all live trees 5.0 inches dbh and larger.

Table 77.--Net volume of growing stock on commercial forest land by species and diameter class, Capitol District Unit, New York, 1980

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	.0	.4	.0	.0	.0	.0	.0	.0	.0	.0	.4
Spruces	3.7	5.6	4.0	2.6	.0	.0	.0	.0	.0	.0	15.9
Red pine	2.8	5.4	1.6	.0	.8	.0	.0	.0	.0	.0	10.6
White pine	20.1	31.2	38.1	35.0	38.0	27.6	15.7	13.1	20.5	3.3	242.6
Hemlock	21.3	31.5	34.3	47.3	32.8	33.5	18.3	9.3	11.1	.8	240.2
Other softwoods	4.2	1.2	1.1	.5	.5	.4	.0	.0	.0	.0	7.9
Total softwoods	52.1	75.3	79.1	85.4	72.1	61.5	34.0	22.4	31.6	4.1	517.6
Red maple	32.6	33.5	41.5	21.3	19.7	11.3	7.1	2.3	3.5	1.6	174.4
Sugar maple	17.3	22.7	28.9	29.7	29.8	23.6	11.9	7.4	4.4	.0	175.7
Yellow birch	2.6	3.6	4.8	6.5	2.3	1.9	.0	.6	.0	.0	22.3
Sweet birch	5.9	6.5	5.3	7.2	5.2	3.4	2.3	.6	.5	.0	36.9
Paper birch	6.6	9.3	5.3	6.8	3.7	2.6	.0	.0	.0	.0	34.3
Hickories	3.6	7.4	10.2	6.4	3.5	1.2	.6	.0	.8	.0	33.7
American beech	2.0	5.9	7.5	7.8	6.2	2.8	4.2	.5	.8	.0	37.7
White ash	8.5	13.9	15.3	7.9	8.2	2.0	3.2	.7	1.6	.0	61.3
Aspens (populus)	13.7	18.6	21.3	7.7	5.7	3.3	.5	.0	.0	.0	70.8
Black cherry	4.8	7.5	11.6	7.7	6.3	3.0	.9	.0	.6	.0	42.4
Select white oaks	1.7	2.8	3.3	2.1	2.0	4.4	.6	1.2	1.4	1.5	21.0
Chestnut oak	7.4	14.2	14.0	9.9	5.3	2.3	.5	.7	1.3	.0	55.6
Northern red oak	6.6	18.7	22.1	27.7	35.6	26.8	16.7	7.9	13.9	1.7	177.7
Other oaks	1.3	1.8	2.1	1.9	1.1	1.2	.8	.5	1.4	.3	12.4
Basswood	1.2	4.2	1.9	2.0	1.4	2.9	.4	.0	.0	.0	14.0
Elms	3.6	10.4	8.9	6.1	4.1	2.6	1.6	1.2	.8	.0	39.3
Other hardwoods	2.7	4.1	7.2	4.0	3.5	2.1	2.0	1.3	.7	.4	28.0
Total hardwoods	122.1	185.1	211.2	162.7	143.6	97.4	53.3	24.9	31.7	5.5	1,037.5
All species	174.2	260.4	290.3	248.1	215.7	158.9	87.3	47.3	63.3	9.6	1,555.1

Table 78.--Net volume of sawtimber on commercial forest land by species and diameter class, Capitol District Unit, New York, 1980

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	.0	.0	.0	.0	.0	.0	.0	.0	.0
Spruces	14.0	11.7	.0	.0	.0	.0	.0	.0	25.7
Red pine	5.4	.0	3.4	.0	.0	.0	.0	.0	8.8
White pine	119.7	135.3	166.0	126.0	75.5	64.3	97.1	17.0	800.9
Hemlock	107.9	182.0	142.9	147.7	81.1	45.3	48.5	2.3	757.7
Other softwoods	2.7	1.7	2.0	1.6	.0	.0	.0	.0	8.0
Total softwoods	249.7	330.7	314.3	275.3	156.6	109.6	145.6	19.3	1,601.1
Red maple	.0	77.8	77.5	47.3	32.3	10.8	16.0	7.3	269.0
Sugar maple	.0	118.5	127.5	107.4	57.3	37.0	20.6	.0	468.3
Yellow birch	.0	25.3	11.3	7.5	.0	3.4	.0	.0	47.5
Sweet birch	.0	31.1	22.9	16.2	10.7	2.6	2.5	.0	86.0
Paper birch	.0	28.5	15.9	10.8	.0	.0	.0	.0	55.2
Hickories	.0	25.4	15.4	5.7	1.7	.0	4.4	.0	52.6
American beech	.0	32.4	26.0	13.4	18.6	2.5	5.1	.0	98.0
White ash	.0	32.0	35.2	8.6	13.8	2.9	7.0	.0	99.5
Aspens (populus)	.0	32.0	25.1	17.5	2.6	.0	.0	.0	77.2
Black cherry	.0	29.8	26.2	13.7	3.4	.0	3.3	.0	76.4
Select white oaks	.0	8.1	8.7	20.6	2.6	6.5	6.3	7.2	60.0
Chestnut oak	.0	39.7	21.1	10.2	1.8	3.6	6.6	.0	83.0
Northern red oak	.0	111.3	159.3	127.5	77.7	39.2	71.2	9.6	595.8
Other oaks	.0	6.3	4.9	5.4	3.5	2.1	6.7	1.9	30.8
Basswood	.0	7.4	5.8	14.0	2.2	.0	.0	.0	29.4
Elms	.0	23.9	16.5	12.3	5.5	6.5	3.8	.0	68.5
Other hardwoods	.0	15.7	15.0	8.8	8.8	5.8	2.9	2.2	59.2
Total hardwoods	.0	645.2	614.3	446.9	242.5	122.9	156.4	28.2	2,256.4
All species	249.7	975.9	928.6	722.2	399.1	232.5	302.0	47.5	3,857.5

[a] International 1/4-inch rule.

Table 79.--Net volume of sawtimber on commercial forest land by species, size class, and standard-lumber log grade, Capitol District Unit, New York, 1980

(In millions of board feet)[a]

Species	All grades	All size classes				>15" Diameter at breast height				
		Grade 1	Grade 2	Grade 3	Grade 4[b]	All grades	Grade 1	Grade 2	Grade 3	Grade 4[b]
Balsam fir[c]	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Spruces[c]	25.7	.0	.0	.0	.0	.0	.0	.0	.0	.0
Red pine	8.8	.0	.9	7.9	.0	.0	.0	.0	.0	.0
White pine	800.9	27.6	139.3	350.6	283.4	379.9	22.4	57.1	161.6	138.8
Hemlock[c]	757.7	.0	.0	.0	.0	.0	.0	.0	.0	.0
Other softwoods[c]	8.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Total softwoods	1,601.1	27.6	140.2	358.5	283.4	379.9	22.4	57.1	161.6	138.8
Red maple	269.0	19.7	33.1	169.4	46.8	113.6	19.7	21.1	59.0	13.8
Sugar maple	468.3	77.7	100.3	233.0	57.3	222.3	71.3	55.8	76.2	19.0
Yellow birch	47.5	.7	5.3	32.8	8.7	10.9	.2	2.6	7.5	.6
Sweet birch	86.0	11.1	24.0	44.6	6.3	32.0	8.8	12.1	9.9	1.2
Paper birch	55.2	1.8	10.1	33.7	9.6	10.9	.0	3.2	5.6	2.1
Hickories	52.6	1.5	7.5	24.4	19.2	11.7	1.5	2.7	2.0	5.5
American beech	98.0	3.7	5.9	67.8	20.6	39.6	3.1	3.2	28.9	4.4
White ash	99.5	8.8	27.4	49.2	14.1	32.4	5.1	7.8	15.3	4.2
Aspens (populus)	77.2	4.2	15.3	42.8	14.9	20.3	4.2	6.6	7.8	1.7
Black cherry	76.4	2.0	12.6	49.3	12.5	20.4	2.0	1.7	14.4	2.3
Select white oaks	60.0	15.5	10.2	22.8	11.5	43.2	15.5	8.9	11.8	7.0
Chestnut oak	83.0	4.5	19.5	48.7	10.3	22.2	4.5	9.6	7.0	1.1
Northern red oak	595.8	169.6	167.1	217.2	41.9	325.2	149.1	83.2	75.7	17.2
Other oaks	30.8	6.3	8.7	11.2	4.6	19.5	6.3	6.3	4.9	2.0
Basswood	29.4	6.3	6.3	15.3	1.5	16.1	6.3	4.3	4.8	.7
Elms	68.5	3.5	15.8	40.4	8.8	28.1	1.3	10.5	13.7	2.6
Other hardwoods	59.2	2.6	10.4	38.4	7.8	28.6	2.6	9.2	14.6	2.2
Total hardwoods	2,256.4	339.5	479.5	1,141.0	296.4	997.0	301.5	248.8	359.1	87.6
Percent of hardwood in each grade	100	15	21	51	13	100	30	25	36	9
Hardwood sampling error (in percent)	5.9	11	7	6	7	8	12	9	8	10

[a] International 1/4-inch rule.

[b] Grade 4 applies only to white pine. For hardwoods the volumes in this column are for construction logs.

[c] These species are not divided into standard-lumber grades.

Table 80.--Sampling errors for timber-volume classes, Capitol District Unit, New York, 1980

(In percent)

Item	Growing-stock volume (Table 77)	Sawtimber volume (Table 79)
Species		
Balsam fir	100	0
Spruces	63	52
Red pine	66	90
White pine	13	13
Hemlock	12	12
Other softwoods	35	63
Red maple	11	16
Sugar maple	14	19
Yellow birch	22	31
Sweet birch	22	27
Paper birch	20	25
Hickories	22	31
American beech	20	24
White ash	17	21
Aspens (populus)	18	33
Black cherry	24	33
Select white oaks	25	30
Chestnut oak	26	35
Northern red oak	13	13
Other oaks	28	29
Basswood	24	36
Elms	17	24
Other hardwoods	30	34
Dbh class (inches)		
5.0 to 6.9	7	-
7.0 to 8.9	6	-
9.0 to 10.9	5	12
11.0 to 12.9	5	6
13.0 to 14.9	6	6
15.0 to 16.9	8	6
17.0 to 18.9	10	9
19.0 to 20.9	12	11
21.0 to 28.9	14	13
29.0+	28	28

Table 81.--Area of commercial forest land by forest type, forest-type group, and stand-size class, Catskill-Lower Hudson Unit, New York, 1980

(In thousands of acres)

Forest type and forest-type group	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Red pine	5.4	11.7	.0	.0	17.1
White pine	114.8	5.4	17.2	.0	137.4
Scotch pine	7.5	.0	5.6	.0	13.1
White pine/hemlock	25.5	11.4	.0	.0	36.9
Hemlock	63.9	.0	.0	.0	63.9
White/red pine group	217.1	28.5	22.8	.0	268.4
Red spruce/balsam fir	.0	.0	6.7	.0	6.7
Norway spruce	7.2	.0	.0	.0	7.2
Spruce/fir group	7.2	.0	6.7	.0	13.9
Eastern redcedar	5.5	5.5	46.3	.0	57.3
Pitch pine	.0	9.4	.0	.0	9.4
Hard pine group	5.5	14.9	46.3	.0	66.7
W.pine/n.r.o./w.ash	11.9	6.2	17.0	.0	35.1
Other oak/pine	7.2	.0	7.2	.0	14.4
Oak/pine group	19.1	6.2	24.2	.0	49.5
Post,blk,or bear oak	27.9	7.5	18.2	.0	53.6
Chestnut oak	50.5	77.6	7.5	.0	135.6
White oak	18.5	32.8	.0	.0	51.3
Northern red oak	83.2	64.2	5.5	.0	152.9
Scarlet oak	.0	19.8	12.5	.0	32.3
W.oak/r.oak/hickory	106.8	44.5	5.5	.0	156.8
Yellow-poplar	11.0	.0	.0	.0	11.0
Black locust	5.5	11.7	6.1	.0	23.3
Hawthorn/revrt.field	.0	.0	.0	5.4	5.4
R.maple/central hdwd	36.9	45.8	5.5	.0	88.2
Mixed cntrl hrdwoods	18.0	.0	.0	.0	18.0
Oak/hickory group	358.3	303.9	60.8	5.4	728.4
Blk.ash/a.elm/r.mpl.	32.0	13.5	45.0	7.2	97.7
Elm/ash/red maple group	32.0	13.5	45.0	7.2	97.7
Sgr.mpl./bch/y.birch	283.4	113.4	46.5	.0	443.3
Black cherry	.0	24.9	11.9	14.4	51.2
R.mpl./nrthrn hrdwds	123.4	92.8	102.0	.0	318.2
Pin chry/rvrt.field	.0	.0	11.7	17.5	29.2
Mixed nrthrn hrdwds	70.6	48.5	41.3	.0	160.4
Northern hardwoods group	477.4	279.6	213.4	31.9	1,002.3
Aspen	.0	.0	13.3	12.8	26.1
Paper birch	.0	5.6	5.4	.0	11.0
Gray birch	.0	6.0	.0	6.0	12.0
Aspen/birch group	.0	11.6	18.7	18.8	49.1
Total, all groups	1,116.6	658.2	437.9	63.3	2,276.0

Table 82.--Net volume and weight of all live timber on commercial forest land by class of material and softwoods and hardwoods, Catskill-Lower Hudson Unit, New York, 1980

Class of material	Volume[a]			Weight[b]		
	Softwoods	Hardwoods	All species	Softwoods	Hardwoods	All species
	--------Million cubic feet-------			-----------Thousand tons------------		
Sawtimber trees:						
Sawlog portion	403.6	913.0	1,316.6	19,172.5	43,357.2	62,529.7
Upper stem	49.4	222.9	272.3	2,276.8	10,472.7	12,749.5
Total	453.0	1,135.9	1,588.9	21,449.3	53,829.9	75,279.2
Poletimber trees	119.9	893.4	1,013.3	4,209.4	39,374.8	43,584.2
All growing stock	572.9	2,029.3	2,602.2	25,658.7	93,204.7	118,863.4
Rough trees[c]	37.5	111.8	149.3	1,812.6	5,074.4	6,887.0
Rotten trees[c]	2.4	57.7	60.1	114.7	2,383.9	2,498.6
Saplings[d]	-	-	-	4,184.4	19,023.1	23,207.5
Stumps[e]	-	-	-	434.3	2,277.1	2,711.4
Tops - growing stock	-	-	-	7,278.2	28,901.4	36,179.6
Tops - rough and rotten	-	-	-	673.4	4,554.2	5,227.6
Total, all classes	612.8	2,198.8	2,811.6	40,156.3	155,418.8	195,575.1

[a] Excludes bark.
[b] Includes bark and sound cull; excludes rotten cull.
[c] Bole portion of trees 5.0 inches dbh and larger.
[d] Includes entire tree aboveground.
[e] Of all live trees 5.0 inches dbh and larger.

Table 83.--Net volume of growing stock on commercial forest land by species and diameter class, Catskill-Lower Hudson Unit, New York, 1980

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Spruces	1.2	4.7	8.1	4.5	3.8	.6	1.7	.0	.0	.0	24.6
Red pine	2.3	3.2	6.1	7.3	1.5	.0	.0	.0	.0	.0	20.4
White pine	17.2	29.0	35.7	42.9	29.9	27.2	15.1	13.5	28.8	4.5	243.8
Hemlock	18.3	25.0	31.4	29.5	39.5	32.7	20.2	13.6	21.1	1.3	232.6
Other softwoods	8.5	10.5	6.3	10.2	5.1	7.6	2.0	.6	.7	.0	51.5
Total softwoods	47.5	72.4	87.6	94.4	79.8	68.1	39.0	27.7	50.6	5.8	572.9
Red maple	46.9	76.0	72.4	65.1	36.6	30.6	17.0	9.5	12.2	2.5	368.8
Sugar maple	25.3	45.1	46.9	55.4	41.2	35.0	21.1	5.4	15.9	2.7	294.0
Yellow birch	7.1	8.0	9.0	9.9	5.1	3.6	2.2	1.5	.4	.0	46.8
Sweet birch	10.1	20.6	22.5	23.6	14.9	9.3	6.0	.6	.8	.0	108.4
Paper birch	3.1	5.6	2.9	3.2	.5	.3	.0	.0	.0	.0	15.6
Hickories	12.3	16.5	17.2	15.9	7.2	4.0	4.3	3.0	2.4	.9	83.7
American beech	8.2	11.7	13.0	18.4	10.6	7.7	3.0	.4	.5	.3	73.8
White ash	16.7	19.9	29.8	20.4	23.6	19.8	11.4	7.6	7.7	.7	157.6
Aspens (populus)	7.3	11.6	9.4	6.3	4.7	2.9	.0	.5	.0	.0	42.7
Black cherry	8.8	12.6	13.5	6.3	7.3	5.4	3.4	1.3	1.8	.5	60.9
Select white oaks	7.6	16.8	19.0	16.7	14.7	11.1	13.4	5.4	8.6	2.9	116.2
Chestnut oak	11.6	32.6	38.6	31.3	17.9	13.2	6.1	1.8	2.9	.0	156.0
Northern red oak	18.3	26.6	33.1	45.3	39.7	40.3	20.4	18.9	28.0	6.6	277.2
Other oaks	8.9	11.8	19.2	17.8	16.4	12.7	12.1	7.0	10.2	5.7	121.8
Basswood	.5	3.3	3.1	8.6	5.7	3.8	2.6	1.1	.7	.4	29.8
Elms	6.0	3.1	3.9	2.5	1.4	.0	.4	.0	.3	.0	17.6
Other hardwoods	4.4	6.5	8.5	8.6	3.4	4.7	5.3	5.4	8.1	3.5	58.4
Total hardwoods	203.1	328.3	362.0	355.3	250.9	204.4	128.7	69.4	100.5	26.7	2,029.3
All species	250.6	400.7	449.6	449.7	330.7	272.5	167.7	97.1	151.1	32.5	2,602.2

Table 84.--Net volume of sawtimber on commercial forest land by species and diameter class, Catskill-Lower Hudson Unit, New York, 1980

(In millions of board feet)[a]

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29+	
Balsam fir	.0	.0	.0	.0	.0	.0	.0	.0	.0
Spruces	28.4	17.4	15.7	2.4	7.8	.0	.0	.0	71.7
Red pine	18.6	29.5	6.4	.0	.0	.0	.0	.0	54.5
White pine	108.9	156.5	121.8	115.8	66.7	59.9	134.4	21.6	785.6
Hemlock	96.7	104.4	152.7	132.9	84.8	58.7	93.4	6.5	730.1
Other softwoods	19.8	36.6	19.3	33.5	6.6	3.2	3.0	.0	122.0
Total softwoods	272.4	344.4	315.9	284.6	165.9	121.8	230.8	28.1	1,763.9
Red maple	.0	229.1	146.1	126.9	71.8	39.6	51.9	12.2	677.6
Sugar maple	.0	218.9	169.7	145.4	88.1	22.8	73.1	11.9	729.9
Yellow birch	.0	40.6	17.3	15.0	7.5	4.9	1.6	.0	86.9
Sweet birch	.0	89.8	60.1	37.4	22.6	2.6	2.6	.0	215.1
Paper birch	.0	12.4	1.7	1.1	.0	.0	.0	.0	15.2
Hickories	.0	53.6	26.1	16.9	18.5	12.6	10.7	4.5	142.9
American beech	.0	77.1	51.2	32.8	15.9	2.5	2.7	1.9	184.1
White ash	.0	74.2	93.1	73.7	46.4	29.4	36.3	3.6	356.7
Aspens (populus)	.0	24.5	20.9	12.4	.0	2.7	.0	.0	60.5
Black cherry	.0	21.5	30.5	22.8	14.5	5.5	9.0	2.3	106.1
Select white oaks	.0	59.4	59.5	46.1	61.2	25.5	42.0	14.0	307.7
Chestnut oak	.0	110.5	66.2	51.4	23.1	7.0	9.9	.0	268.1
Northern red oak	.0	165.8	158.2	168.0	87.4	86.6	128.3	29.9	824.2
Other oaks	.0	65.3	62.8	52.7	50.6	29.9	42.6	27.4	331.3
Basswood	.0	32.5	22.7	17.7	11.7	5.4	2.6	1.7	94.3
Elms	.0	8.9	5.0	.0	1.8	.0	1.7	.0	17.4
Other hardwoods	.0	31.2	12.8	22.7	27.5	28.0	38.0	20.0	180.2
Total hardwoods	.0	1,315.3	1,003.9	843.0	548.6	305.0	453.0	129.4	4,598.2
All species	272.4	1,659.7	1,319.8	1,127.6	714.5	426.8	683.8	157.5	6,362.1

[a] International 1/4-inch rule.

Table 85.--Net volume of sawtimber on commercial forest land by species, size class, and standard-lumber log grade, Catskill-Lower Hudson Unit, New York, 1980

(In millions of board feet)[a]

Species	All grades	All size classes				>15" Diameter at breast height				
		Grade 1	Grade 2	Grade 3	Grade 4[b]	All grades	Grade 1	Grade 2	Grade 3	Grade 4[b]
Balsam fir[c]	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Spruces[c]	71.7	.0	.0	.0	.0	.0	.0	.0	.0	.0
Red pine	54.5	3.4	.4	50.7	.0	.0	.0	.0	.0	.0
White pine	785.6	13.7	86.7	369.0	316.2	398.4	11.5	42.2	158.5	186.2
Hemlock[c]	730.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
Other softwoods[c]	122.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Total softwoods	1,763.9	17.1	87.1	419.7	316.2	398.4	11.5	42.2	158.5	186.2
Red maple	677.6	30.4	103.7	408.2	135.3	302.5	27.3	64.2	161.4	49.6
Sugar maple	729.9	86.6	177.4	345.4	120.5	341.3	65.0	96.5	131.3	48.5
Yellow birch	86.9	4.4	19.1	57.9	5.5	28.9	3.6	10.3	14.0	1.0
Sweet birch	215.1	14.0	49.1	134.0	18.0	65.4	11.9	21.0	28.3	4.2
Paper birch	15.2	.0	1.7	9.2	4.3	1.1	.0	.0	.9	.2
Hickories	142.9	10.7	26.7	65.7	39.8	63.1	10.7	16.6	22.7	13.1
American beech	184.1	1.9	12.4	121.4	48.4	55.9	1.0	9.6	35.3	10.0
White ash	356.7	76.1	105.2	131.0	44.4	189.4	71.3	42.5	59.4	16.2
Aspens (populus)	60.5	1.7	17.2	34.7	6.9	15.2	.0	7.3	6.5	1.4
Black cherry	106.1	17.9	19.5	53.9	14.8	54.1	16.0	10.4	21.3	6.4
Select white oaks	307.7	58.6	65.4	121.4	62.3	188.7	56.3	45.1	48.6	38.7
Chestnut oak	268.1	35.8	59.6	141.2	31.5	91.4	31.4	27.0	25.7	7.3
Northern red oak	824.2	218.1	219.3	311.0	75.8	500.2	205.7	140.5	114.1	39.9
Other oaks	331.3	44.5	75.9	124.1	86.8	203.1	43.3	54.9	64.2	40.7
Basswood	94.3	9.8	29.2	49.9	5.4	39.1	9.8	15.0	12.3	2.0
Elms	17.4	.0	4.4	8.8	4.2	3.5	.0	2.3	1.0	.2
Other hardwoods	180.2	46.2	25.9	82.1	26.0	136.2	46.2	21.1	51.6	17.3
Total hardwoods	4,598.2	656.7	1,011.7	2,199.9	729.9	2,279.1	599.5	584.3	798.6	296.7
Percent of hardwood in each grade	100	14	22	48	16	100	26	26	35	13
Hardwood sampling error (in percent)	4.2	7	5	4	5	5	8	7	6	9

[a] International 1/4-inch rule.

[b] Grade 4 applies only to white pine. For hardwoods the volumes in this column are for construction logs.

[c] These species are not divided into standard-lumber grades.

Table 86.--Sampling errors for timber-volume classes, Catskill-Lower Hudson Unit, New York, 1980

(In percent)

Item	Growing-stock volume (Table 83)	Sawtimber volume (Table 84)
Species		
Balsam fir	0	0
Spruces	50	53
Red pine	54	67
White pine	15	16
Hemlock	16	17
Other softwoods	27	35
Red maple	8	12
Sugar maple	10	12
Yellow birch	18	23
Sweet birch	13	17
Paper birch	24	39
Hickories	13	17
American beech	16	19
White ash	12	14
Aspens (populus)	18	26
Black cherry	21	28
Select white oaks	13	14
Chestnut oak	14	17
Northern red oak	10	11
Other oaks	13	14
Basswood	19	19
Elms	25	33
Other hardwoods	22	30
Dbh class (inches)		
5.0 to 6.9	6	-
7.0 to 8.9	5	-
9.0 to 10.9	4	15
11.0 to 12.9	4	5
13.0 to 14.9	5	5
15.0 to 16.9	6	5
17.0 to 18.9	6	6
19.0 to 20.9	8	8
21.0 to 28.9	8	8
29.0+	16	15

Table 87.--Land area, by county, geographic unit, and land class, New York, 1980

County[a] and geographic unit	Forest land		Total land	Proportion commercial	Sampling error
	Commercial	Reserved[b]			
	Thousand acres			Percent	
Cayuga/Seneca	198.6	1.6	657.9	30	5
Erie	229.6	.8	677.1	34	5
Genesee	94.1	2.1	320.6	29	7
Livingston	120.1	11.9	408.3	29	6
Madison	196.2	.3	423.0	46	4
Monroe	96.1	4.6	432.0	22	11
Niagara	65.1	.1	340.5	19	17
Onondaga	199.9	1.5	508.2	39	5
Ontario	142.7	1.3	416.6	34	6
Orleans	74.2	1.1	253.4	29	9
Oswego	416.9	1.0	617.0	68	2
Wayne	101.9	.3	387.8	26	7
Wyoming	145.0	7.6	382.7	38	7
Yates	84.0	1.2	219.5	38	6
Lake Plain Unit	2,164.4	35.4	6,044.6	36	1.5
Allegany	421.5	-	670.1	63	3
Cattaraugus	470.3	58.2	843.5	56	3
Chautauqua	362.6	.2	691.8	52	3
Steuben	478.1	.6	902.4	53	3
Southwest Highlands Unit	1,732.5	59.0	3,107.8	56	1.5
Broome	279.4	1.7	457.0	61	3
Chemung	158.0	.6	265.6	60	4
Chenango	340.3	-	577.9	59	4
Cortland	158.1	.1	321.3	49	5
Delaware	624.3	40.3	923.5	68	2
Otsego	369.5	1.8	648.3	57	3
Schuyler	122.2	.6	211.2	58	3
Tioga	193.6	-	335.4	58	3
Tompkins	171.5	1.9	308.5	56	6
South-central Highlands Unit	2,416.9	47.0	4,048.7	60	1.2
Clinton	465.1	26.4	677.8	69	3
Franklin	655.1	219.2	1,071.4	61	2
Jefferson	359.6	20.8	828.2	43	5
St. Lawrence	1,118.6	140.5	1,771.5	63	2
St. Lawrence-Northern Adirondack Unit	2,598.4	406.9	4,348.9	60	1.3
Fulton	179.4	75.0	318.7	56	2
Herkimer	388.1	302.9	918.4	42	3
Lewis	574.1	60.9	826.2	70	8
Oneida	413.2	10.0	782.7	53	8
Western Adirondack Unit	1,554.8	448.8	2,846.0	55	1.4

Table 87.--(continued)

County[a] and geographic unit	Forest land		Total land	Proportion commercial	Sampling error
	Commercial	Reserved[b]			
	Thousand acres			Percent	
Essex	557.9	513.4	1,166.7	48	2
Hamilton	373.8	712.0	1,110.4	34	2
Warren	336.3	187.3	567.7	59	1
Eastern Adirondack Unit	1,268.0	1,412.7	2,844.8	45	1.2
Albany	162.2	1.2	336.6	48	6
Columbia	216.9	4.8	412.8	53	4
Montgomery	81.9	W	261.1	31	8
Rensselaer	253.9	2.0	425.6	60	4
Saratoga	356.2	17.9	523.5	68	3
Schenectady	66.7	W	132.5	50	9
Washington	257.0	19.4	535.0	48	4
Capitol District Unit	1,394.8	45.3	2,627.1	53	1.6
Dutchess	298.6	3.3	520.3	57	4
Greene	252.3	61.0	417.9	60	3
Orange	259.0	31.5	533.1	49	5
Putnam	89.9	9.5	147.8	61	3
Schoharie	256.7	.1	399.4	64	4
Suffolk	101.0	22.3	594.6	17	12
Sullivan	463.9	12.0	627.2	74	2
Ulster	428.9	142.5	730.2	59	3
Westchester/Rockland	125.7	38.9	396.2	32	8
Catskill-Lower Hudson Unit	2,276.0	321.1	4,366.7	52	1.4
Total, all units	15,405.8	2,776.2	30,234.6	51	.5

[a] Multi-county groupings are used for counties with too few forested field plots or with other sampling anomalies. This is done when more detailed county-level data are presented in order to minimize sampling errors.

[b] Unit and State totals will differ from those in Tables 1 and 2. Includes only productive and unproductive reserved forest land estimates from state records. Excludes urban forest land, other unproductive and Christmas tree plantation estimates.

W-Less than 50 acres.

Table 88.--Area of commercial forest land by county, geographic unit, and stand-size class, New York, 1980

(In thousands of acres)

County[a] and geographic unit	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Cayuga/Seneca	88.1	39.6	64.4	6.5	198.6
Erie	94.1	35.2	64.5	35.8	229.6
Genesee	17.3	35.4	35.7	5.7	94.1
Livingston	32.1	25.5	51.0	11.5	120.1
Madison	74.1	45.1	64.3	12.7	196.2
Monroe	17.2	26.6	40.3	12.0	96.1
Niagara	24.9	12.8	27.4	.0	65.1
Onondaga	73.6	23.8	78.5	24.0	199.9
Ontario	42.3	42.1	40.7	17.6	142.7
Orleans	23.7	20.3	24.0	6.2	74.2
Oswego	139.5	126.5	138.2	12.7	416.9
Wayne	37.4	27.9	31.9	4.7	101.9
Wyoming	35.3	49.2	44.5	16.0	145.0
Yates	15.0	10.1	49.4	9.5	84.0
Lake Plain Unit	714.6	520.1	754.8	174.9	2,164.4
Allegany	156.7	91.5	149.3	24.0	421.5
Cattaraugus	171.8	166.3	118.4	13.8	470.3
Chautauqua	172.4	71.3	77.3	41.6	362.6
Steuben	169.4	124.7	140.1	43.9	478.1
Southwest Highlands Unit	670.3	453.8	485.1	123.3	1,732.5
Broome	97.4	74.2	95.8	12.0	279.4
Chemung	39.8	50.7	56.7	10.8	158.0
Chenango	127.9	89.4	111.6	11.4	340.3
Cortland	74.5	48.6	35.0	.0	158.1
Delaware	285.2	165.0	167.3	6.8	624.3
Otsego	154.0	83.1	110.6	21.8	369.5
Schuyler	60.5	30.3	25.0	6.4	122.2
Tioga	62.5	68.5	50.4	12.2	193.6
Tompkins	76.2	50.2	38.2	6.9	171.5
South-central Highlands Unit	978.0	660.0	690.6	88.3	2,416.9
Clinton	134.4	194.7	136.0	.0	465.1
Franklin	330.2	201.8	105.0	18.1	655.1
Jefferson	97.1	44.4	181.0	37.1	359.6
St. Lawrence	394.0	348.8	334.4	41.4	1,118.6
St. Lawrence-Northern Adirondack Unit	955.7	789.7	756.4	96.6	2,598.4
Fulton	83.8	53.1	42.5	.0	179.4
Herkimer	188.6	109.5	82.7	7.3	388.1
Lewis	255.2	143.5	145.1	30.3	574.1
Oneida	209.6	75.2	121.4	7.0	413.2
Western Adirondack Unit	737.2	381.3	391.7	44.6	1,554.8

Table 88.--(continued)

(In thousands of acres)

County[a] and geographic unit	Sawtimber stands	Poletimber stands	Sapling and seedling stands	Nonstocked areas	All classes
Essex	269.9	176.3	111.7	.0	557.9
Hamilton	182.3	149.1	42.4	.0	373.8
Warren	203.4	103.5	29.4	.0	336.3
Eastern Adirondack Unit	655.6	428.9	183.5	.0	1,268.0
Albany	59.4	35.8	56.0	11.0	162.2
Columbia	106.1	78.4	32.4	.0	216.9
Montgomery	30.8	24.2	26.9	.0	81.9
Rensselaer	104.3	114.7	28.7	6.2	253.9
Saratoga	170.9	87.6	97.7	.0	356.2
Schenectady	14.1	36.0	16.6	.0	66.7
Washington	94.7	106.6	55.7	.0	257.0
Capitol District Unit	580.3	483.3	314.0	17.2	1,394.8
Dutchess	160.3	77.5	60.8	.0	298.6
Greene	110.3	79.7	50.9	11.4	252.3
Orange	89.0	81.7	60.7	27.6	259.0
Putnam	36.7	45.9	7.3	.0	89.9
Schoharie	90.8	65.1	89.7	11.1	256.7
Suffolk	38.1	31.0	31.9	.0	101.0
Sullivan	245.0	164.8	48.1	6.0	463.9
Ulster	267.1	78.7	75.9	7.2	428.9
Westchester/Rockland	79.3	33.8	12.6	.0	125.7
Catskill-Lower Hudson Unit	1,116.6	658.2	437.9	63.3	2,276.0
Total, all units	6,408.3	4,375.3	4,014.0	608.2	15,405.8

[a] Multi-county groupings are used for counties with too few forested field plots or with other sampling anomalies. This is done when more detailed county-level data are presented in order to minimize sampling errors.

Table 89.--Area of commercial forest land by county, geographic unit, and major forest-type group, New York, 1980

(In thousands of acres)

County[a] and geographic unit	Softwood types	Oak types	Northern hardwood types	All types
Cayuga/Seneca	.0	80.4	118.2	198.6
Erie	29.6	52.8	147.2	229.6
Genesee	6.0	41.2	46.9	94.1
Livingston	20.8	32.3	67.0	120.1
Madison	39.6	25.7	130.9	196.2
Monroe	5.4	40.1	50.6	96.1
Niagara	.0	51.4	13.7	65.1
Onondaga	6.0	36.6	157.3	199.9
Ontario	11.5	42.8	88.4	142.7
Orleans	.0	32.3	41.9	74.2
Oswego	37.9	37.9	341.1	416.9
Wayne	4.7	37.9	59.3	101.9
Wyoming	9.6	21.5	113.9	145.0
Yates	9.7	44.9	29.4	84.0
Lake Plain Unit	180.8	577.8	1,405.8	2,164.4
Allegany	24.4	91.2	305.9	421.5
Cattaraugus	35.0	56.7	378.6	470.3
Chautauqua	29.9	53.6	279.1	362.6
Steuben	24.2	75.4	378.5	478.1
Southwest Highlands Unit	113.5	276.9	1,342.1	1,732.5
Broome	11.7	79.3	188.4	279.4
Chemung	28.5	44.6	84.9	158.0
Chenango	49.5	39.6	251.2	340.3
Cortland	19.0	5.9	133.2	158.1
Delaware	32.2	87.8	504.3	624.3
Otsego	55.0	33.0	281.5	369.5
Schuyler	5.8	24.5	91.9	122.2
Tioga	45.0	39.5	109.1	193.6
Tompkins	6.0	44.0	121.5	171.5
South-central Highlands Unit	252.7	398.2	1,766.0	2,416.9
Clinton	116.1	21.1	327.9	465.1
Franklin	161.6	23.9	469.6	655.1
Jefferson	63.1	96.4	200.1	359.6
St. Lawrence	204.6	97.5	816.5	1,118.6
St. Lawrence-Northern Adirondack Unit	545.4	238.9	1,814.1	2,598.4
Fulton	52.0	9.4	118.0	179.4
Herkimer	64.5	21.8	301.8	388.1
Lewis	86.9	30.5	456.7	574.1
Oneida	40.7	44.6	327.9	413.2
Western Adirondack Unit	244.1	106.3	1,204.4	1,554.8

Table 89.--(continued)

(In thousands of acres)

County[a] and geographic unit	Softwood types	Oak types	Northern hardwood types	All types
Essex	157.1	53.8	347.0	557.9
Hamilton	87.7	.0	286.1	373.8
Warren	178.2	18.1	140.0	336.3
Eastern Adirondack Unit	423.0	71.9	773.1	1,268.0
Albany	65.4	28.6	68.2	162.2
Columbia	43.2	102.9	70.8	216.9
Montgomery	21.2	33.8	26.9	81.9
Rensselaer	51.5	68.4	134.0	253.9
Saratoga	75.5	47.8	232.9	356.2
Schenectady	5.2	15.5	46.0	66.7
Washington	39.3	44.2	173.5	257.0
Capitol District Unit	301.3	341.2	752.3	1,394.8
Dutchess	44.4	143.4	110.8	298.6
Greene	57.6	39.4	155.3	252.3
Orange	22.2	130.5	106.3	259.0
Putnam	.0	58.0	31.9	89.9
Schoharie	54.7	38.0	164.0	256.7
Suffolk	16.6	84.4	.0	101.0
Sullivan	73.7	165.5	224.7	463.9
Ulster	79.8	133.9	215.2	428.9
Westchester/Rockland	.0	82.5	43.2	125.7
Catskill-Lower Hudson Unit	349.0	875.6	1,051.4	2,276.0
Total, all units	2,409.8	2,886.8	10,109.2	15,405.8

[a] Multi-county groupings are used for counties with too few forested field plots or with other sampling anomalies. This is done when more detailed county-level data are presented in order to minimize sampling errors.

Table 90.--Net volume of growing stock on commercial forest land by county, geographic unit, and major species group, New York, 1980

County[a] and geographic unit	White pine	Hemlock	Other softwoods	Maples	Oaks	Other Hardwoods	Total	Sampling error
	Million cubic feet							Percent
Cayuga/Seneca	1.5	8.7	4.0	84.3	11.2	86.6	196.3	9
Erie	22.5	23.5	16.5	70.1	5.9	76.6	215.1	8
Genesee	.9	.0	1.2	22.7	5.1	40.5	70.4	13
Livingston	1.3	9.6	10.9	32.0	21.4	39.2	114.4	12
Madison	1.1	14.4	30.3	53.4	4.9	63.1	167.2	7
Monroe	.0	.0	3.8	18.5	11.5	33.6	67.4	12
Niagara	.0	.0	.0	2.1	8.5	22.4	33.0	19
Onondaga	2.3	8.7	6.4	65.9	.5	65.7	149.5	11
Ontario	12.4	1.3	1.6	21.2	36.5	54.3	127.3	10
Orleans	.0	1.7	.0	8.7	1.9	35.7	48.0	17
Oswego	13.3	46.0	39.3	163.9	2.3	121.2	386.0	7
Wayne	1.4	1.6	1.3	38.5	1.0	50.9	94.7	13
Wyoming	.7	12.0	12.4	44.1	3.2	59.0	131.4	9
Yates	5.2	8.8	1.9	8.5	27.7	11.4	63.5	15
Lake Plain Unit	62.6	136.3	129.6	633.9	141.6	760.2	1,864.2	2.7
Allegany	1.8	19.9	30.8	154.1	67.1	145.7	419.4	7
Cattaraugus	7.9	25.7	16.7	196.0	63.9	198.2	508.4	6
Chautauqua	4.2	34.7	18.2	142.1	11.7	150.9	361.8	7
Steuben	27.4	38.6	2.2	136.9	72.8	229.0	506.9	6
Southwest Highlands Unit	41.3	118.9	67.9	629.1	215.5	723.8	1,796.5	3.2
Broome	2.0	24.7	1.1	95.6	64.8	95.3	283.5	5
Chemung	13.5	17.4	15.5	33.6	45.5	50.9	176.4	7
Chenango	5.3	47.9	66.6	119.6	38.1	83.2	360.7	5
Cortland	.0	2.5	17.9	86.6	2.4	73.7	183.1	6
Delaware	18.0	36.0	8.9	393.6	49.2	231.2	736.9	3
Otsego	21.6	69.3	10.9	131.8	34.5	107.1	375.2	4
Schuyler	19.7	9.3	2.4	33.1	25.7	43.1	133.3	8
Tioga	19.6	15.1	14.7	69.9	38.0	58.1	215.4	6
Tompkins	10.8	6.0	10.9	48.4	27.4	94.2	197.7	6
South-central Highlands Unit	110.5	228.2	148.9	1,012.2	325.6	836.8	2,662.2	1.7
Clinton	25.5	9.2	99.8	131.1	17.4	187.8	470.8	5
Franklin	16.2	34.9	159.9	292.1	1.5	233.8	738.4	3
Jefferson	16.7	13.2	40.9	90.3	10.9	76.3	248.3	9
St. Lawrence	42.7	37.1	179.2	318.6	8.3	358.3	944.2	3
St. Lawrence-Northern Adirondack Unit	101.1	94.4	479.8	832.1	38.1	856.2	2,401.7	2.1
Fulton	11.5	42.8	7.6	40.8	1.9	63.1	167.7	6
Herkimer	6.0	43.1	70.4	112.5	1.3	102.9	336.2	4
Lewis	26.7	23.1	56.9	176.0	2.1	207.3	492.1	4
Oneida	34.0	42.9	8.6	126.2	7.7	135.3	354.7	5
Western Adirondack Unit	78.2	151.9	143.5	455.5	13.0	508.6	1,350.7	2.3

Table 90.--(continued)

County[a] and geographic unit	White pine	Hemlock	Other softwoods	Maples	Oaks	Other Hardwoods	Total	Sampling error
	Million cubic feet							Percent
Essex	131.1	69.9	96.6	157.3	39.4	216.4	710.7	5
Hamilton	11.5	24.9	96.9	98.9	.0	145.9	378.1	6
Warren	155.4	72.2	25.1	74.8	31.5	89.5	448.5	6
Eastern Adirondack Unit	298.0	167.0	218.6	331.0	70.9	451.8	1,537.3	3.2
Albany	49.9	20.0	1.9	38.8	6.0	26.7	143.3	9
Columbia	35.5	15.4	17.7	38.6	77.2	70.6	255.0	6
Montgomery	14.6	26.3	1.9	12.9	6.9	22.0	84.6	12
Rensselaer	44.2	42.8	7.4	102.7	50.2	56.8	304.1	5
Saratoga	78.0	71.4	3.4	84.3	65.3	106.4	408.8	5
Schenectady	2.9	5.2	.4	11.9	14.1	32.6	67.1	12
Washington	17.5	59.1	2.1	60.9	47.0	105.6	292.2	6
Capitol District Unit	242.6	240.2	34.8	350.1	266.7	420.7	1,555.1	2.5
Dutchess	3.2	9.1	5.5	80.4	95.3	108.9	302.4	5
Greene	61.3	15.7	11.7	95.8	38.7	70.8	294.0	5
Orange	1.3	17.2	20.2	49.0	101.1	102.9	291.7	6
Putnam	.0	3.2	.0	30.4	51.9	35.2	120.7	6
Schoharie	29.8	25.2	14.3	78.7	44.7	68.8	261.5	6
Suffolk	16.2	.0	16.5	1.1	36.9	6.0	76.7	22
Sullivan	49.5	69.7	23.4	178.7	148.8	127.2	597.3	4
Ulster	80.8	91.6	4.3	131.0	123.3	119.0	550.0	4
Westchester/Rockland	1.7	.9	.6	17.7	30.5	56.5	107.9	10
Catskill-Lower Hudson Unit	243.8	232.6	96.5	662.8	671.2	695.3	2,602.2	1.9
Total, all units	1,178.1	1,369.5	1,319.6	4,906.7	1,742.6	5,253.4	15,769.9	.8

[a] Multi-county groupings are used for counties with too few forested field sample plots. This is done when more detailed county-level data are presented in order to minimize sampling errors.

Table 91.--Net volume of sawtimber on commercial forest land by county, geographic unit, and major species group, New York, 1980

County[a] and geographic unit	White pine	Hemlock	Other softwoods	Maples	Oaks	Other Hardwoods	Total	Sampling error
	Million board feet[b]							Percent
Cayuga/Seneca	5.3	24.1	6.4	168.9	48.5	252.1	505.3	12
Erie	51.0	70.2	46.6	190.9	26.1	201.1	585.9	10
Genesee	1.5	.0	.0	64.2	18.9	87.8	172.4	19
Livingston	2.3	29.1	30.2	82.1	61.3	84.5	289.5	15
Madison	4.4	28.4	41.3	137.3	20.2	140.3	371.9	9
Monroe	.0	.0	.0	56.6	46.5	69.6	172.7	17
Niagara	.0	.0	.0	1.7	25.2	49.4	76.3	25
Onondaga	10.8	37.6	10.6	203.0	.0	159.2	421.2	14
Ontario	33.6	5.8	2.1	60.5	131.4	107.7	341.1	15
Orleans	.0	2.8	.0	22.6	2.3	61.3	89.0	26
Oswego	35.1	125.7	121.2	349.1	6.8	232.9	870.8	10
Wayne	1.1	2.8	.0	108.9	4.6	124.2	241.6	17
Wyoming	1.3	38.2	29.8	123.9	11.9	109.3	314.4	15
Yates	21.5	29.7	.0	8.4	101.4	16.5	177.5	19
Lake Plain Unit	167.9	394.4	288.2	1,578.1	505.1	1,695.9	4,629.6	3.9
Allegany	6.2	46.9	59.4	288.9	200.4	329.4	931.2	9
Cattaraugus	15.2	71.0	34.2	429.4	219.8	446.3	1,215.9	7
Chautauqua	10.4	89.9	26.0	394.0	49.4	365.2	934.9	21
Steuben	90.3	95.3	5.1	279.0	222.6	417.9	1,110.2	8
Southwest Highlands Unit	122.1	303.1	124.7	1,391.3	692.2	1,558.8	4,192.2	4.1
Broome	5.1	63.9	1.8	209.9	214.4	180.6	675.7	7
Chemung	50.4	32.5	37.1	60.1	125.7	90.5	396.3	11
Chenango	13.0	132.6	183.3	278.7	100.9	210.5	919.0	6
Cortland	.0	8.0	35.1	224.1	2.9	220.3	490.4	9
Delaware	81.5	122.6	28.1	914.2	133.0	570.5	1,849.9	5
Otsego	66.0	209.2	30.8	321.5	117.4	227.6	972.5	6
Schuyler	58.2	32.4	4.8	62.2	61.3	106.3	325.2	10
Tioga	68.5	42.0	24.4	157.7	136.0	110.1	538.7	9
Tompkins	31.6	14.4	14.4	143.6	81.1	251.9	537.0	9
South-central Highlands Unit	374.3	657.6	359.8	2,372.0	972.7	1,968.3	6,704.7	2.4
Clinton	87.6	29.9	261.7	179.0	46.1	345.1	949.4	7
Franklin	54.6	114.0	268.9	484.8	3.4	601.1	1,526.8	5
Jefferson	48.3	31.7	124.1	249.2	34.4	172.1	659.8	9
St. Lawrence	157.3	122.1	356.5	695.8	15.9	911.2	2,258.8	4
St. Lawrence-Northern Adirondack Unit	347.8	297.7	1,011.2	1,608.8	99.8	2,029.5	5,394.8	2.8
Fulton	37.3	123.2	20.6	75.2	8.6	124.8	389.7	8
Herkimer	27.0	134.1	180.5	224.5	3.5	280.9	850.5	6
Lewis	61.2	79.2	120.2	396.2	7.9	505.1	1,169.8	5
Oneida	122.9	136.9	21.3	287.1	20.8	305.3	894.3	7
Western Adirondack Unit	248.4	473.4	342.6	983.0	40.8	1,216.1	3,304.3	3.1

Table 91.--(continued)

County[a] and geographic unit	White pine	Hemlock	Other softwoods	Maples	Oaks	Other Hardwoods	Total	Sampling error
	Million board feet[b]							Percent
Essex	489.5	235.0	220.6	418.9	85.2	506.8	1,956.0	8
Hamilton	38.9	101.3	224.3	305.5	.0	438.7	1,108.7	8
Warren	517.1	227.3	51.2	174.8	85.3	186.6	1,242.3	8
Eastern Adirondack Unit	1,045.5	563.6	496.1	899.2	170.5	1,132.1	4,307.0	4.7
Albany	140.2	78.0	1.0	100.0	17.2	48.3	384.7	10
Columbia	107.3	45.5	10.7	91.0	231.3	134.4	620.2	7
Montgomery	42.1	79.8	6.9	14.5	23.5	40.9	207.7	14
Rensselaer	148.8	135.5	14.8	216.8	111.6	93.7	721.2	6
Saratoga	280.7	202.3	9.1	149.6	218.3	185.4	1,045.4	6
Schenectady	9.5	11.1	.0	18.7	69.3	49.2	157.8	15
Washington	72.3	205.5	.0	146.7	98.4	197.6	720.5	7
Capitol District Unit	800.9	757.7	42.5	737.3	769.6	749.5	3,857.5	3.0
Dutchess	10.4	27.8	3.8	187.7	292.5	224.6	746.8	7
Greene	178.7	46.9	26.5	201.0	95.1	128.4	676.6	7
Orange	3.8	74.2	59.7	122.0	276.5	225.0	761.2	7
Putnam	.0	3.7	.0	76.3	141.9	82.2	304.1	9
Schoharie	84.5	58.7	38.3	176.5	91.7	183.6	633.3	7
Suffolk	48.7	.0	38.1	.0	84.0	7.3	178.1	28
Sullivan	186.2	219.0	78.8	341.4	370.2	232.2	1,427.8	5
Ulster	267.6	296.4	3.0	258.6	282.8	258.2	1,366.6	5
Westchester/Rockland	5.7	3.4	.0	44.0	96.6	117.9	267.6	15
Catskill-Lower Hudson Unit	785.6	730.1	248.2	1,407.5	1,731.3	1,459.4	6,362.1	2.4
Total, all units	3,892.5	4,177.6	2,913.3	10,977.2	4,982.0	11,809.6	38,752.2	1.2

[a] Multi-county groupings are used for counties with too few forested field sample plots. This is done when more detailed county-level data are presented in order to minimize sampling errors.

[b] International 1/4 inch rule.

Table 92.--Area of commercial forest land by county and geographic unit, New York, 1968 and 1980

County and geographic unit	1968[a]	1980	Change	Change
	----------Thousand acres----------			Percent
Cayuga/Seneca[b]	145.9	198.6	52.7	36
Erie	202.8	229.6	26.8	13
Genesee	84.3	94.1	9.8	12
Livingston	102.2	120.1	17.9	18
Madison	159.0	196.2	37.2	23
Monroe	66.8	96.1	29.3	44
Niagara	59.7	65.1	5.4	9
Onondaga	160.5	199.9	39.4	25
Ontario	111.9	142.7	30.8	28
Orleans	50.6	74.2	23.6	47
Oswego	388.1	416.9	28.8	7
Wayne	84.7	101.9	17.2	20
Wyoming	120.6	145.0	24.4	20
Yates	73.4	84.0	10.6	14
Lake Plain Unit	1,810.5	2,164.4	353.9	20
Allegany	398.8	421.5	22.7	6
Cattaraugus	503.5	470.3	-33.2	- 7
Chautauqua	322.5	362.6	40.1	12
Steuben	444.1	478.1	34.0	8
Southwest Highlands Unit	1,668.9	1,732.5	63.6	4
Broome	260.0	279.4	19.4	7
Chemung	137.6	158.0	20.4	15
Chenango	304.7	340.3	35.6	12
Cortland	162.0	158.1	-3.9	- 2
Delaware	517.7	624.3	106.6	21
Otsego	310.0	369.5	59.5	19
Schuyler	116.2	122.2	6.0	5
Tioga	174.1	193.6	19.5	11
Tompkins	160.6	171.5	10.9	7
South-central Highlands Unit	2,142.9	2,416.9	274.0	13
Clinton	448.0	465.1	17.1	4
Franklin	639.3	655.1	15.8	2
Jefferson	291.0	359.6	68.6	24
St. Lawrence	1,122.3	1,118.6	-3.7	W
St. Lawrence-Northern Adirondack Unit	2,500.6	2,598.4	97.8	4
Fulton	158.6	179.4	20.8	13
Herkimer	393.2	388.1	-5.1	- 1
Lewis	549.7	574.1	24.4	4
Oneida	370.2	413.2	43.0	12
Western Adirondack Unit	1,471.7	1,554.8	83.1	6

Table 92.--(continued)

County and geographic unit	1968[a]	1980	Change	Change
	Thousand acres			Percent
Essex	584.9	557.9	-27.0	- 5
Hamilton	371.2	373.8	2.6	1
Warren	330.3	336.3	6.0	2
Eastern Adirondack Unit	1,286.4	1,268.0	-18.4	- 1
Albany	134.5	162.2	27.7	21
Columbia	194.4	216.9	22.5	12
Montgomery	70.5	81.9	11.4	16
Rensselaer	231.8	253.9	22.1	10
Saratoga	351.4	356.2	4.8	1
Schenectady	51.2	66.7	15.5	30
Washington	236.0	257.0	21.0	9
Capitol District Unit	1,269.8	1,394.8	125.0	10
Dutchess	276.4	298.6	22.2	8
Greene	236.3	252.3	16.0	7
Orange	261.2	259.0	-2.2	- 1
Putnam	95.3	89.9	-5.4	- 6
Schoharie	246.5	256.7	10.2	4
Suffolk[c]	127.8	101.0	-26.8	- 21
Sullivan	443.0	463.9	20.9	5
Ulster	445.9	428.9	-17.0	- 4
Westchester/Rockland	130.8	125.7	-5.1	- 4
Catskill-Lower Hudson Unit	2,263.2	2,276.0	12.8	1
Total, all units	14,414.0	15,405.8	991.8	7

[a] These figures differ from those published for 1968 (Ferguson and Mayer 1970). A detailed explanation of these figures appears in the analytical report on the forest resources of New York.

[b] Multi-county groupings are used for counties with too few forested field sample plots. This is done when more detailed county-level data are presented in order to minimize sampling errors.

[c] The 1968 estimate for Suffolk county excludes a portion of the western part of the county.

W-Less than 0.5 percent.

Table 93.--Net volume of growing stock on commercial forest land by county and geographic unit, New York, 1968 and 1980

County[a] and geographic unit	1968[b]	1980	Change	Change
	Million cubic feet			Percent
Cayuga/Seneca	116.6	196.3	79.7	68
Erie	139.9	215.1	75.2	54
Genesee	43.5	70.4	26.9	62
Livingston	69.1	114.4	45.3	66
Madison	105.4	167.2	61.8	59
Monroe	47.8	67.4	19.6	41
Niagara	33.8	33.0	-.8	- 2
Onondaga	100.1	149.5	49.4	49
Ontario	101.5	127.3	25.8	25
Orleans	27.7	48.0	20.3	73
Oswego	293.9	386.0	92.1	31
Wayne	66.3	94.7	28.4	43
Wyoming	91.6	131.4	39.8	43
Yates	57.8	63.5	5.7	10
Lake Plain Unit	1,295.0	1,864.2	569.2	44
Allegany	318.4	419.4	101.0	32
Cattaraugus	350.4	508.4	158.0	45
Chautauqua	247.8	361.8	114.0	46
Steuben	353.8	506.9	153.1	43
Southwest Highlands Unit	1,270.4	1,796.5	526.1	41
Broome	174.9	283.5	108.6	62
Chemung	121.5	176.4	54.9	45
Chenango	206.7	360.7	154.0	75
Cortland	142.4	183.1	40.7	29
Delaware	485.1	736.9	251.8	52
Otsego	280.1	375.2	95.1	34
Schuyler	97.3	133.3	36.0	37
Tioga	168.9	215.4	46.5	28
Tompkins	149.6	197.7	48.1	32
South-central Highlands Unit	1,826.5	2,662.2	835.7	46
Clinton	295.3	470.8	175.5	59
Franklin	450.0	738.4	288.4	64
Jefferson	138.5	248.3	109.8	79
St. Lawrence	729.7	944.2	214.5	29
St. Lawrence-Northern Adirondack Unit	1,613.5	2,401.7	788.2	49
Fulton	125.0	167.7	42.7	34
Herkimer	312.2	336.2	24.0	8
Lewis	411.4	492.1	80.7	20
Oneida	263.8	354.7	90.9	34
Western Adirondack Unit	1,112.4	1,350.7	238.3	21

Table 93.--(continued)

County[a] and geographic unit	1968[b]	1980	Change	Change
	Million cubic feet			Percent
Essex	574.2	710.7	136.5	24
Hamilton	359.9	378.1	18.2	5
Warren	301.2	448.5	147.3	49
Eastern Adirondack Unit	1,235.3	1,537.3	302.0	24
Albany	96.9	143.3	46.4	48
Columbia	140.6	255.0	114.4	81
Montgomery	49.8	84.6	34.8	70
Rensselaer	207.9	304.1	96.2	46
Saratoga	319.8	408.8	89.0	28
Schenectady	33.0	67.1	34.1	103
Washington	190.8	292.2	101.4	53
Capitol District Unit	1,038.8	1,555.1	516.3	50
Dutchess	235.7	302.4	66.7	28
Greene	216.7	294.0	77.3	36
Orange	248.3	291.7	43.4	17
Putnam	93.0	120.7	27.7	30
Schoharie	209.7	261.5	51.8	25
Suffolk	62.3	76.7	14.4	23
Sullivan	449.6	597.3	147.7	33
Ulster	416.6	550.0	133.4	32
Westchester/Rockland	101.9	107.9	6.0	6
Catskill-Lower Hudson Unit	2,033.8	2,602.2	568.4	28
Total, all units	11,425.7	15,769.9	4,344.2	38

[a] Multi-county groupings are used for counties with too few forested field plots or with other sampling anomalies. This is done when more detailed county-level data are presented in order to minimize sampling errors.

[b] These figures differ from those published for 1968 (Ferguson and Mayer 1970). A detailed explanation of these figures appears in the analytical report on the forest resources of New York.

Table 94.--Net volume of sawtimber on commercial forest land by county and geographic unit, New York, 1968 and 1980

County[a] and geographic unit	1968[b]	1980	Change	Change
	Million board feet[c]			Percent
Cayuga/Seneca	254.8	505.3	250.5	98
Erie	298.4	585.9	287.5	96
Genesee	89.8	172.4	82.6	92
Livingston	146.4	289.5	143.1	98
Madison	221.8	371.9	150.1	68
Monroe	103.6	172.7	69.1	67
Niagara	75.1	76.3	1.2	2
Onondaga	207.5	421.2	213.7	103
Ontario	228.0	341.1	113.1	50
Orleans	59.0	89.0	30.0	51
Oswego	623.2	870.8	247.6	40
Wayne	143.1	241.6	98.5	69
Wyoming	195.8	314.4	118.6	61
Yates	128.5	177.5	49.0	38
Lake Plain Unit	2,775.0	4,629.6	1,854.6	67
Allegany	624.2	931.2	307.0	49
Cattaraugus	662.3	1,215.9	553.6	84
Chautauqua	478.3	934.9	456.6	95
Steuben	675.6	1,110.2	434.6	64
Southwest Highlands Unit	2,440.4	4,192.2	1,751.8	72
Broome	301.8	675.7	373.9	124
Chemung	217.5	396.3	178.8	82
Chenango	357.5	919.0	561.5	157
Cortland	265.1	490.4	225.3	85
Delaware	944.1	1,849.9	905.8	96
Otsego	566.2	972.5	406.3	72
Schuyler	176.2	325.2	149.0	85
Tioga	320.4	538.7	218.3	68
Tompkins	276.7	537.0	260.3	94
South-central Highlands Unit	3,425.5	6,704.7	3,279.2	96
Clinton	671.5	949.4	277.9	41
Franklin	1,037.1	1,526.8	489.7	47
Jefferson	305.5	659.8	354.3	116
St. Lawrence	1,663.7	2,258.8	595.1	36
St. Lawrence-Northern Adirondack Unit	3,677.8	5,394.8	1,717.0	47
Fulton	321.5	389.7	68.2	21
Herkimer	814.3	850.5	36.2	4
Lewis	1,057.5	1,169.8	112.3	11
Oneida	664.6	894.3	229.7	35
Western Adirondack Unit	2,857.9	3,304.3	446.4	16

Table 94.--(continued)

County[a] and geographic unit	1968[b]	1980	Change	Change
	--------- Million board feet[c]		--------	Percent
Essex	1,584.4	1,956.0	371.6	23
Hamilton	1,016.8	1,108.7	91.9	9
Warren	814.2	1,242.3	428.1	53
Eastern Adirondack Unit	3,415.4	4,307.0	891.6	26
Albany	212.9	384.7	171.8	81
Columbia	300.6	620.2	319.6	106
Montgomery	121.9	207.7	85.8	70
Rensselaer	471.7	721.2	249.5	53
Saratoga	727.8	1,045.4	317.6	44
Schenectady	70.5	157.8	87.3	124
Washington	424.2	720.5	296.3	70
Capitol District Unit	2,329.6	3,857.5	1,527.9	66
Dutchess	512.9	746.8	233.9	46
Greene	476.5	676.6	200.1	42
Orange	557.5	761.2	203.7	37
Putnam	206.8	304.1	97.3	47
Schoharie	460.1	633.3	173.2	38
Suffolk	123.1	178.1	55.0	45
Sullivan	1,007.3	1,427.8	420.5	42
Ulster	908.6	1,366.6	458.0	50
Westchester/Rockland	229.1	267.6	38.5	17
Catskill-Lower Hudson Unit	4,481.9	6,362.1	1,880.2	42
Total, all units	25,403.5	38,752.2	13,348.7	53

[a] Multi-county groupings are used for counties with too few forested field plots or with other sampling anomalies. This is done when more detailed county-level data are presented in order to minimize sampling errors.

[b] These figures differ from those published for 1968 (Ferguson and Mayer 1970). A detailed explanation of these figures appears in the analytical report on the forest resources of New York.

[c] International 1/4-inch rule.

Table 95.--Net volume of growing stock on commercial forest land by species, New York, 1968 and 1980

Species	1968[a]	1980	Change	Change
	Million cubic feet			Percent
Balsam fir	164	199	35	21
Spruces	436	524	88	20
Red pine	306	320	14	5
White pine	897	1,178	281	31
Hemlock	1,016	1,369	353	35
Other softwoods	157	277	120	76
Total softwoods	2,976	3,867	891	30
Red maple	1,512	2,393	881	58
Sugar maple	1,852	2,514	662	36
Yellow birch	370	499	129	35
Sweet birch	132	232	100	76
Paper birch	160	196	36	23
Hickories	240	295	55	23
American beech	723	1,010	287	40
White ash	561	896	335	60
Aspens (populus)	385	653	268	70
Black cherry	294	693	399	136
Select white oaks	247	265	18	7
Chestnut oak	232	273	41	18
Northern red oak	782	1,031	249	32
Other oaks	129	173	44	34
Basswood	356	353	-3	-1
Elms	360	121	-239	-66
Other hardwoods	115	306	191	166
Total hardwoods	8,450	11,903	3,453	41
All species	11,426	15,770	4,344	38

[a] These figures differ from those published for 1968 (Ferguson and Mayer 1970). A detailed explanation of these figures appears in the analytical report on the forest resources of New York.

Table 96.--Net volume of sawtimber on commercial forest land by species, New York, 1968 and 1980

Species	1968[a]	1980	Change	Change
	Million board feet[b]			Percent
Balsam fir	224	316	92	41
Spruces	914	1,191	277	30
Red pine	407	868	461	113
White pine	2,741	3,892	1,151	42
Hemlock	2,718	4,178	1,460	54
Other softwoods	287	538	251	87
Total softwoods	7,291	10,983	3,692	51
Red maple	2,411	4,670	2,259	94
Sugar maple	3,987	6,307	2,320	58
Yellow birch	987	1,308	321	32
Sweet birch	142	425	283	199
Paper birch	218	275	57	26
Hickories	419	549	130	31
American beech	1,839	2,601	762	41
White ash	1,001	1,875	874	87
Aspens (populus)	564	1,108	544	96
Black cherry	718	1,716	998	139
Select white oaks	720	817	97	14
Chestnut oak	415	497	82	20
Northern red oak	2,145	3,197	1,052	49
Other oaks	371	471	100	27
Basswood	912	1,030	118	13
Elms	947	200	-747	- 79
Other hardwoods	317	723	406	128
Total hardwoods	18,113	27,769	9,656	53
All species	25,404	38,752	13,348	53

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[a] These figures differ from those published for 1968 (Ferguson and Mayer 1970). A detailed explanation of these figures appears in the analytical report on the forest resources of New York.

[b] International 1/4-inch rule.

Literature Cited

Ferguson, Roland H.; and Mayer, C. E. The timber resources of New York. 1970; USDA For. Serv. Resour. Bull. NE-20. 193 p.

Nevel, Robert L., Jr.; Sochia, E. L.; Wahl, T. H. 1980 New York timber industries - a periodic assessment of timber output. USDA For. Serv. Resour. Bull. (In press). 1982.

Scott, Charles T. Northeastern Forest survey board foot volume equations. 1979; USDA For. Serv. Res. Note NE-271. 3 p.

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Appendix

Definition of terms

Accretion. The estimated net growth of growing-stock trees that were measured during the previous inventory, divided by the length of the period between surveys. It includes the growth on trees that were cut during the period, plus those trees that died and were used.

Annual mortality trend-level. The estimated mortality of growing stock or sawtimber for a specific year (1979 for New York) based on average rates of diameter growth and mortality for the period. This estimate is consistent with the average annual change during the period between surveys and with the current inventory.

Annual net growth trend-level. The estimated mortality of growing stock or sawtimber for a specific year (1979 for New York) based on average rates of diameter growth and mortality for the period. This estimate is consistent with the average annual change during the period between surveys and with the current inventory.

Annual removals trend-level. The estimated removals of growing stock or sawtimber for a specific year (1979 for New York) obtained from a trend line for the period. This line is established by fitting a curve to actual removals data for several years during the period. The actual removals for the year given can vary from the trend estimate because of fluctuations in market conditions and other factors.

Average annual net growth. The change, resulting from natural causes, in growing-stock or sawtimber volume of sound wood in growing-stock or sawtimber trees during the period between surveys, divided by the length of the period. Components of average annual net growth include the increment in net volume of trees that are present at the beginning of the period and that survive to the end (accretion), plus average annual ingrowth, minus average annual mortality, and minus the net volume of trees that became rough or rotten during the period (cull increment).

Average annual removals. The net growing-stock or sawtimber volume of trees harvested or killed in logging, cultural operations--such as timber stand improvement-or land clearing, and also the net growing-stock or sawtimber volume of trees neither harvested nor killed but growing on land which was reclassified from commercial forest land to noncommercial forest land during the period between surveys. This volume is divided by the length of the period.

Board foot. A unit of lumber measurement 1 foot long, 1 foot wide, and 1 inch thick, or its equivalent.

Coarse residues. Manufacturing residues suitable for chipping, such as slabs, edgings, and veneer cores.

Commercial forest land. Forest land producing or capable of producing crops of industrial wood (more than 20 cubic feet per acre per year) and not withdrawn from timber utilization.

Commercial species. Tree species presently or prospectively suitable for industrial wood products. Excludes species of typically small size, poor form, or inferior quality, such as hawthorn and sumac.

County and municipal lands. Lands owned by counties and local public agencies or municipalities or leased to them for 50 years or more.

Cull increment. The net volume of growing-stock trees on the previous inventory that became rough or rotten trees in the current inventory, divided by the length of the period between surveys.

Diameter at breast height (dbh). The diameter outside bark of a standing tree measured at 4-1/2 feet above the ground.

Farmer-owned lands. Lands owned by farm operators, whether part of the farmstead or not. Excludes land leased by farm operators from nonfarm owners.

Federal lands. Lands (other than National Forests) administered by Federal agencies.

Fine residues. Manufacturing residues not suitable for chipping, such as sawdust and shavings.

Forest industry lands. Lands owned by companies or individuals operating primary wood-using plants.

Forest land. Land at least 10 percent stocked with trees of any size or that formerly had such tree cover and is not currently developed for nonforest use. The minimum area for classification of forest land is 1 acre.

Forest type. A classification of forest land based on the species forming a plurality of live-tree stocking. The many forest types in New York were combined into the following major forest-type groups:

a. White/red pine--forests in which white pine, red pine, or hemlock singly or in combination, comprise a plurality of the stocking; in New York common associates include red maple, oak, sugar maple and aspen.

b. Spruce/fir--forests in which red, white, black or Norway Spruces, balsam fir, northern white-cedar, tamarack, or planted larch, singly or in combination comprise a plurality of the stocking; in New York common associates include white pine, red maple, yellow birch, and aspens.

c. Hard pine--forests in which eastern redcedar, or pitch pine, singly or in combination comprise a plurality of the stocking; in New York common associates include white pine, paper birch, sugar maple, and basswood.

d. Oak/pine--forests in which hardwoods (usually hickory or oak) comprise a plurality of the stocking but where white pine or eastern redcedar comprise 25 to 50 percent of the stocking.

e. Oak/hickory--forests in which upland oaks, hickory, yellow-poplar, black locust, sweetgum, or red maple (when associated with central hardwoods), singly or in combination, comprise a plurality of the stocking and in which white or hard pines, or eastern redcedar comprise less than 25 percent of the stocking; in New York common associates include white ash, sugar maple and hemlock.

f. Elm/ash/red maple--forests in which elm, willow, cottonwood, or red maple (when growing on wet sites), singly or in combination, comprise a plurality of the stocking; in New York common associates include white ash, sugar maple, aspens, and oaks.

g. Northern hardwoods--forests in which sugar maple, beech, yellow birch, black cherry, or red maple (when associated with northern hardwoods), singly or in combination, comprise a plurality of the stocking; in New York common associates include white ash, hemlock, basswood, aspens, and red oak.

h. Aspen/birch--forests in which aspen and paper or gray birch, alone or in combination comprises a plurality of the stocking; in New York common associates include red maple, white pine, red oaks and white ash.

Growing-stock trees. Live trees of commercial species classified as sawtimber, poletimber, saplings, and seedlings; that is, all live trees of commercial species except rough and rotten trees.

Growing-stock volume. Net volume, in cubic feet of growing-stock trees 5.0 inches dbh and larger, from a 1-foot stump to a minimum 4.0-inch top diameter outside bark of the central stem, or to the point where the central stem breaks into limbs. Net volume equals gross volume, less deduction for cull.

Hardwoods. Dicotyledonous trees, usually broad-leaved and deciduous.

Industrial wood. All roundwood products except fuelwood.

Ingrowth. The estimated net volume of growing stock trees that became 5.0 inches dbh or larger during the period between inventories, divided by the length of the period between surveys.

International 1/4-inch rule. A log rule, or formula, for estimating the board-foot volume of logs. The mathematical formula is:

$$(0.22D^2 - 0.71D)(0.904762)$$

for 4-foot sections, where D = diameter inside bark at the small end of the section. This rule is used as the USDA Forest Service Standard Log rule in the eastern United States.

Land area. (a) Bureau of Census: The area of dry land and land temporarily or partly covered by water, such as marshes, swamps, and river flood plains; streams, sloughs, estuaries, and canals less than 1/8 statute mile wide; and lakes, reservoirs, and ponds less than 40 acres in area. (b) Resources Evaluation: same as (a) except that the minimum width of streams, etc., is 120 feet, and the minimum size of lakes, etc., is 1 acre.

Logging residues. The unused portions of growing-stock trees harvested or killed in the process of logging.

Manufacturing plant residues. Wood materials that are generated when converting round timber (roundwood) into wood products. This includes slabs, edgings, trimmings, bark, miscuts, sawdust, shavings, veneer cores and clippings, and pulp screening. If these residues are used, they are referred to as plant byproducts.

Miscellaneous private lands. Privately owned lands other than forest industry and farmer-owned lands.

Mortality. The estimated net volume of growing-stock trees on the previous inventory that died from natural causes before the current inventory, divided by the length of the period between surveys.

National Forest lands. Federal lands legally designated as National Forests or purchase units and other lands administered as part of the National Forest System by the USDA Forest Service.

Noncommercial forest land. Productive-reserved, urban, and unproductive forest land.

Noncommercial species. Tree species of typically small size, poor form, or inferior quality that normally do not develop into trees suitable for industrial wood products.

Nonforest land. Land that has never supported forests, or land formerly forested but now in nonforest use such as cropland, pasture, residential areas, and highways.

Nonstocked areas. Commercial forest land that is stocked with less than 10 percent of minimum full stocking with growing-stock trees.

Plant byproducts. Wood products, such as pulp chips, recycled from manufacturing plant residues.

Poletimber stands. Stands stocked with at least 10 percent of minimum full stocking with growing-stock trees with half or more of such stocking in poletimber or sawtimber trees or both, and in which the stocking of poletimber exceeds that of sawtimber.

Poletimber trees. Live trees of commercial species meeting regional specifications of soundness and form and at least 5.0 inches in dbh, but smaller than sawtimber trees.

Productive-reserved forest land. Forest land sufficiently productive to qualify as commercial forest land, but withdrawn from timber utilization through statute, administrative designation, or exclusive use for Christmas tree production.

Primary wood manufacturing plant. A plant that converts round timber into wood products such as woodpulp, lumber, veneer, cooperage, and dimension products.

Pulpwood. Roundwood converted into 4-or 5-foot lengths or chips, and chipped plant byproducts that are prepared for manufacture into woodpulp.

Rotten trees. Live trees of commercial species that do not contain at least one 12-foot sawlog or two noncontiguous sawlogs, each 8 feet or longer, now or prospectively, and do not meet regional specifications for freedom from defect primarily because of rot; that is, when more than 50 percent of the cull volume in a tree is rotten.

Rough trees. (a) The same as rotten trees, except that rough trees do not meet regional specifications for freedom from defect primarily because of roughness or poor form, and (b) all live trees of noncommercial species.

Roundwood products. Logs, bolts, total tree chips, or other round timber generated by harvesting trees for industrial or consumer uses.

Saplings. Live trees 1.0 through 4.9 inches dbh.

Sapling-seedling stands. Stands stocked with at least 10 percent of minimum full stocking with growing-stock trees with half or more of such stocking in saplings or seedlings or both.

Sawlog. A log meeting regional standards of diameter, length, and defect, including a minimum 8-foot length and a minimum diameter inside bark of 6 inches for softwoods and 8 inches for hardwoods. (See specifications under Log Grade Classification.)

Sawlog portion. That part of the bole of a sawtimber tree between the stump and the sawlog top; that is, the merchantable height.

Sawlog top. The point on the bole of a sawtimber tree above which a sawlog cannot be produced. The minimum sawlog top is 7.0 inches diameter outside bark (dob) for softwoods and 9.0 inches dob for hardwoods.

Sawtimber stands. Stands stocked with at least 10 percent of minimum full stocking with growing-stock trees with half or more of such stocking in poletimber or sawtimber trees or both, and in which the stocking of sawtimber is at least equal to that of poletimber.

Sawtimber trees. Live trees of commercial species at least 9.0 inches dbh for softwoods or 11.0 inches for hardwoods containing at least one 12-foot sawlog or two noncontiguous 8-foot sawlogs, and meeting regional specifications for freedom from defect.

Sawtimber volume. Net volume in board feet, International 1/4-inch rule, of sawlogs in sawtimber trees. Net volume equals gross volume less deductions for rot, sweep, and other defects that affect use for lumber.

Seedlings. Live trees less than 1.0 inch dbh that are expected to survive.

Site class. A classification of forest land in terms of inherent capacity to grow crops of industrial wood. Classifications are based on the mean annual growth of growing-stock trees attainable in fully stocked natural stands at culmination of mean annual increment.

Softwoods. Coniferous trees, usually evergreen and having needles or scalelike leaves.

Stand. A group of forest trees growing on forest land.

Stand-size class. A classification of forest land based on the size class (that is, seedlings, saplings, poletimber, or sawtimber) of growing-stock trees in the area.

Standard cord. A unit of measure for stacked bolts of wood, encompassing 128 cubic feet of wood, bark, and air space. Fuelwood cord estimates can be derived from cubic-foot estimates of growing stock by applying an average factor of 80 cubic feet of solid wood per cord. For pulpwood, a conversion of 85 cubic feet of solid wood per cord is used because of the more uniform character of pulpwood.

State lands. Lands owned by the State or leased to the State for 50 years or more.

Stocking. The degree of occupancy of land by trees, measured by basal area and/or number of trees in a stand compared to the basal area and/or number of trees required to fully use the growth potential of the land (or the stocking standard). In the eastern United States this standard is 75 square feet of basal area per acre for trees 5.0 inches dbh and larger, or its equivalent in numbers of trees per acre for seedlings and saplings.

Two categories of stocking are used:

All live trees - these are used to classify forest land and forest types.

Growing-stock trees - these are used to classify stand-size classes.

Timber products. Manufacturing plant byproducts and roundwood (round timber) products harvested from growing-stock trees on commercial forest land; from other sources, such as cull trees, salvable dead trees, limbs, tops and saplings; and from trees on noncommercial forest and nonforest lands.

Timber removals. The growing-stock or sawtimber volumes of trees removed from the inventory for roundwood products, plus logging residues, volume destroyed during land clearing, and volume of standing trees growing on land that was reclassified from commercial forest land to noncommercial forest land. (See Table 35).

Trees. Woody plants that have well-developed stems and are usually more than 12 feet in height at maturity.

Unproductive forest land. Forest land that is incapable of producing 20 cubic feet per acre per year of industrial wood under natural conditions, because of adverse site conditions.

Unproductive reserved forest land. Forest land that is classed as unproductive, is publicly owned, and is withdrawn from timber harvest.

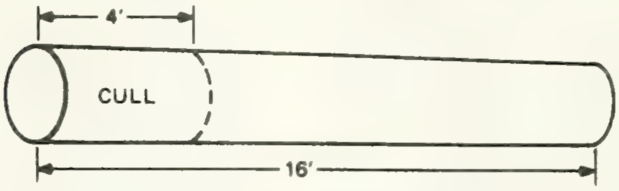
Unused manufacturing residues. Plant residues that are dumped or destroyed and not recovered for plant byproducts.

Upper-stem portion. That part of the main stem or fork of a sawtimber tree above the sawlog top to a diameter of 4.0 inches outside bark or to the point where the main stem or fork breaks into limbs.

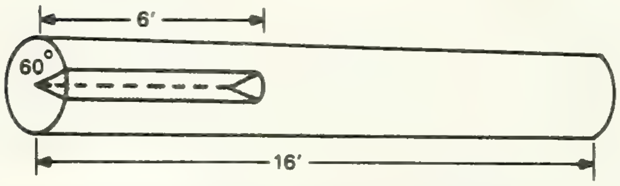
Urban forest land. Noncommercial forest land within urban areas that is completely surrounded by urban development (not parks), whether commercial, industrial, or residential.

Methods of determining scaling deduction.

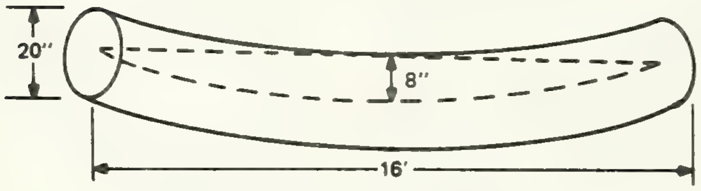
(Examples based on a 16-foot log with 20-inch scaling diameter)



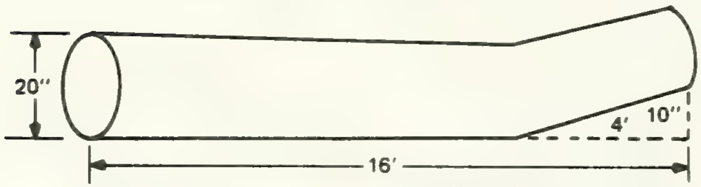
Defect section (rule 1): Percent deduction = $\frac{4}{16}$ = 25%



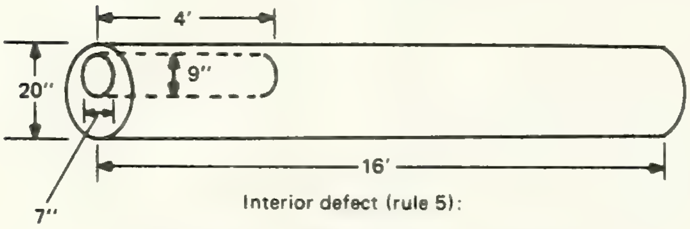
Defect section (rule 2): Percent deduction = $\left(\frac{6}{16}\right)\left(\frac{60}{360}\right)$ = 6-1/4%



Sweep (rule 3): Percent deduction = $\frac{8-2}{20}$ = 30%



Crook (rule 4): Percent deduction = $\left(\frac{10}{20}\right)\left(\frac{4}{16}\right)$ = 12-1/2%



Interior defect (rule 5):

Percent deduction = $\frac{(8)\,(10)}{(20-1)^2} \times \frac{4}{16}$ = 5-5/9%

In practice each ellipse axis can be divided by (20–1)

Thus $\frac{8}{19}$ = .4, $\frac{10}{19}$ .5, and (.4) (.5) $\left(\frac{4}{16}\right)$ = 5%

From: Grosenbaugh, L.R. 1952. Shortcuts for cruisers and scalers. U.S. Dep, Agric. For. Serv. South. For Exp. Stn. Occas. Pap. 126.

STANDARD GRADES FOR HARDWOOD FACTORY LUMBER LOGS

Grading Factors		Log grades							
		F1			F2				F3
Position in tree		Butts only	Butts & uppers		Butts & Uppers				Butts & uppers
Scaling diameter, inches		13-15[a]	16-19	20+	11+[b]	12+			8+
Length without trim, feet		10+			10+	8-9	10-11	12+	8+
Required clear cuttings[c] of each of 3 best faces[d]	Min. length, feet	7	5	3	3	3	3	3	2
	Max. number	2	2	2	2	2	2	3	No limit
	Min. proportion of log length required in clear cutting	5/6	5/6	5/6	2/3	3/4	2/3	2/3	1/2
Maximum sweep & crook allowance	For logs with less than ¼ of end in sound defects	15%			30%				50%
	For logs with more than ¼ of end in sound defects	10%			20%				35%
Maximum scaling	deduction	40%[e]			50%[f]				50%

End defects although not visible in standing trees, are important in grading cut logs. Instructions for dealing with this factor are contained in Forest Prod. Lab. Rpt. D 1737.

[a] Ash and basswood butts can be 12 inches if they otherwise meet requirements for small #1's.

[b] Ten-inch logs of all species can be #2 if they otherwise meet requirements for small #1's.

[c] A clear cutting is the portion of a face, extending the width of the face, that is free of defects.

[d] A face is ¼ of the surface of the log as divided lengthwise.

[e] Otherwise #1 logs with 41-60% deductions can be #2.

[f] Otherwise #2 logs with 51-60% deductions can be #3.

From: Vaughan, C. L., A. C. Wollin, K. A. McDonald, and E. H. Bulgrin. 1966. Hardwood log grades for standard lumber. USDA For. Serv. Res. Pap. FPL-63.

STANDARD SPECIFICATIONS FOR HARDWOOD CONSTRUCTION LOGS.[a]

Position in tree		Butt & upper
Min. diameter, small end		8 inches +
Min. length, without trim		8 feet
Clear cuttings		No requirements.
Sweep allowance, absolute		**1/4 diameter small end for each 8 feet of length.**
Sound surface defects	Single knots	Any number, if no one knot has an average diameter above the callus in excess of 1/3 of log diameter at point of occurrence.
	Whorled knots	Any number if sum of knot diameters above the callus does not exceed 1/3 of log diameter at point of occurrence.
	Holes	Any number provided none has a diameter over 1/3 of log diameter at point of occurrence, and none extends over 3 inches into included timber.[b]
Unsound surface defects		Same requirements as for sound defects if they extend into included timber.[b] No limit if they do not.
End defects	Sound	No requirements.
	Unsound	None allowed; log must be sound internally, but will admit 1 shake not to exceed 1/4 the scaling diameter and a longitudinal split not extending over 5 inches into the contained timber.

[a] These specifications are minimum for the class. If, from a group of logs, factory logs are selected first, thus leaving only nonfactory logs from which to select construction logs, then the quality range of the construction logs so selected is limited, and the class may be considered a grade. If selection for construction logs is given first priority, then it may be necessary to subdivide the class into grades.

[b] Included timber is always square, and dimension is judged from small end.

From: Rast, E. D., D. L. Sonderman, and G. L. Gammon. 1973. A guide to hardwood log grading (Revised). USDA For. Serv. Gen. Tech. Rep. NE-1.

EASTERN WHITE PINE SAWLOG GRADE SPECIFICATIONS

GRADING FACTOR	LOG GRADE 1	LOG GRADE 2	LOG GRADE 3	LOG GRADE 4
(1) MINIMUM SCALING DIAMETER (inches)	14[1]	6	6	6
(2) MINIMUM LOG LENGTH (feet)	10[2]	8	8	8
(3) MAXIMUM WEEVIL INJURY (number)	None	None	2 injuries[3]	No limit
(4) MINIMUM FACE REQUIREMENTS	Two full length or four 50% length good faces.[4] (In addition, log knots on balance of faces shall not exceed size limitations of grade 2 logs.)	No GOOD FACES REQUIRED. Maximum diameter of log knots on three best faces **SOUND RED KNOTS** not to exceed 1/6 scaling diameter and 3 inch maximum. **DEAD OR BLACK KNOTS** including overgrown knots not to exceed 1/12 scaling diameter and 1½ inch maximum.	**SOUND RED KNOTS** not to exceed 1/3 scaling diameter and 5 inch maximum. **DEAD OR BLACK KNOTS** including overgrown knots not to exceed 1/6 scaling diameter and 2½ inch maximum.	Includes all logs not qualifying for No. 3 or better and judged to have at least one-third of their gross volume in sound wood suitable for manufacture into standard lumber.
(5) MAXIMUM SWEEP OR CROOK ALLOWANCE (percent)	20	30	40	66⅔
(6) MAXIMUM TOTAL SCALING DEDUCTION (percent)	50	50	50	66⅔

After the tentative log grade is established from face examination, the log will be reduced in grade whenever the following defects are evident:

(7) CONKS, PUNK KNOTS, AND PINE BORER DAMAGE ON BARK SURFACE[5]

Degrade one grade if present on one face.
Degrade two grades if present on two faces.
Degrade three grades if present on three or more faces.

(8) LOG END DEFECTS: RED ROT, RING SHAKE, HEAVY STAIN AND PINE BORER DAMAGE OUTSIDE HEART CENTER OF LOG[5]

Consider log as having a total of 8 quarters (4 on each end) and degrade as indicated below:
Degrade one grade if present in 2 quarters of log ends.
Degrade two grades if present in 3 or 4 quarters of log ends.
Degrade three grades if present in 5 or more quarters of log ends.

[1] 12 and 13 inch logs with four full length good faces are acceptable.
[2] 8 foot logs with four full length good faces are acceptable.
[3] 8 foot No. 3 logs limited to one weevil injury.
[4] Minimum 50% length good face must be at least 6 feet
[5] Factors 7 and 8 are not cumulative (total degrade based on more serious of the two). No log to be degraded below grade 4 if net scale is at least one-third gross log scale.

From: Ostrander, M. D., and R. L. Brisbin, 1971. Sawlog grades for eastern white pine. USDA For. Serv. Res. Pap. NE-205.

SOUTHERN PINE SAWLOGS

Grade 1. Logs with 3 or 4 clear faces.[1] Code 1.

Grade 2. Logs with 1 or 2 clear faces. Code 2.

Grade 3. Logs with no clear faces. Code 3.

After the tentative log grade is established from above, the log will be degraded one grade for each of the following, except that no log can be degraded below grade 3.

1. *Sweep.* Degrade any tentative 1 or 2 log one grade if sweep amounts to 3 or more inches and equals or exceeds one third (1/3) the diameter inside bark at small end. This is the final grade if there is no evidence of heart rot.

2. *Heart rot.* Degrade any tentative 1 or 2 log one grade if conk, massed hyphae, or other evidence of advanced heart rot is found anywhere in it.

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[1] A face is one-fourth of the circumference in width extending full length of the log. Clear faces are those free of: knots measuring more than one-half inch in diameter, overgrown knots of any size, holes more than one-fourth inch in diameter. The faces may be rotated if necessary to obtain the maximum number of clear ones.

From: Schroeder, J. G., R. A. Campbell, and R. C. Rodenbach. 1968. Southern pine sawlogs for yard and structural lumber. USDA For. Serv. Res. Pap. SE-39.

Commercial tree species of New York

Scientific Name[a]	Common Name	Occurrence[b]
Softwoods		
Abies balsamea	balsam fir	c
Chamaecyparis thyoides	Atlantic white-cedar	vr
Juniperus virginiana	Eastern redcedar	r
Larix spp.	larch spp.	r
Picea abies	Norway spruce	c
P. glauca	white spruce	r
P. mariana	black spruce	r
P. pungens	blue spruce	vr
P. rubens	red spruce	c
Pinus banksiana	jack pine	vr
P. resinosa	red pine	c
P. rigida	pitch pine	r
P. strobus	eastern white pine	vc
P. sylvestris	Scotch pine	r
Pseudotsuga menziesii	Douglas-fir	vr
Thuja occidentalis	northern white-cedar	c
Tsuga canadensis	eastern hemlock	vc
Hardwoods		
Acer nigrum	black maple	vr
A. rubrum	red maple (soft)	vc
A. saccharinum	silver maple	r
A. saccharum	sugar maple (hard)	vc
Aesculus glabra	Ohio buckeye	vr
Betula alleghaniensis	yellow birch	c
B. lenta	sweet birch (black)	c
B. nigra	river birch	r
B. papyrifera	paper birch (white)	c
Carya spp.	hickory	c
Castanea dentata	American chestnut	vr
Fagus grandifolia	American beech	vc
Fraxinus americana	white ash	c
F. nigra	black ash	r
F. pennsylvanica	green ash	r
Gleditsia triacanthos	honey locust	vr
Juglans cinerea	butternut	r
J. nigra	black walnut	r
Liriodendron tulipifera	yellow-poplar (tulip tree)	r
Magnolia acuminata	cucumbertree	vr
Nyssa sylvatica	blackgum (black tupelo)	vr
Platanus occidentalis	American sycamore	vr
Populus balsamifera	balsam poplar	r
P. deltoides	Eastern cottonwood	r
P. grandidentata	bigtooth aspen	c
P. tremuloides	quaking aspen	c
Prunus serotina	black cherry	c
Quercus alba	white oak	c
Q. bicolor	swamp white oak	r
Q. coccinea	scarlet oak	r
Q. macrocarpa	bur oak	r
Q. palustris	pin oak	r
Q. prinus	chestnut oak	c
Q. rubra	northern red oak	vc

Tree species (continued)

Q. stellata var. *stellata*	post oak	vr
Q. velutina	black oak	c
Robinia pseudoacacia	black locust	r
Salix spp.	willow spp.	r
Sassafras albidum	sassafras	vr
Tilia spp.	basswood spp.	c
Ulmus spp.	elm spp.	c

[a] Names according to: Little, Elbert L., Jr. 1979. Checklist of United States Trees (native and naturalized). For. Serv., U.S. Dept. Agric., Agric. Handb. 541. Washington, D.C. 375 p.

[b] Occurrence is based on the frequency of tally of commercial species 5.0 inches dbh or larger on forest survey field plots: vr - very rare (<0.05%), r - rare (0.05 to 0.49%), c - common (0.5 to 4.9%), and vc - very common (>5.0%).

Metric equivalents of units used in this report

1 acre = 4,046.86 square meters or 0.404686 hectares
1,000 acres = 404.686 hectares
1,000,000 acres = 404,686 hectares
1,000 board feet = 3.48 meters[a]
1 cubic foot = 0.028317 cubic meters
1,000 cubic feet = 28.317 cubic meters
1,000,000 cubic feet = 28,317 cubic meters
1 cord (wood, bark, and airspace) = 3.6246 cubic meters
1 cord (solid wood, pulpwood) = 2.4069 cubic meters
1 cord (solid wood, other than pulpwood) = 2.2654 cubic meters
1,000 cords (pulpwood) = 2,406.9 cubic meters
1,000 cords (other products) = 2,265.4 cubic meters
1 inch = 2.54 centimeters or 0.0254 meters
1 foot = 30.48 centimeters or 0.3048 meters
Breast height = 1.4 meters above ground level
1 mile = 1.609 kilometers
1 square foot = 929.03 square centimeters or 0.0929 square meters
1 square foot per acre basal area = 0.229568 square meters per hectare

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[a] While 1,000 board feet is theoretically equivalent to 2.36 cubic meters, this is true only when a board foot is actually a piece of wood with a volume 1/12 of a cubic foot. The International 1/4-inch log rule is used by the USDA Forest Service in the East to estimate the product potential in board feet. The reliability of the estimate, using a conversion, will vary with the size of the log measure. The conversion given here, 3.48 cubic meters, is based on the cubic volume of a log 16 feet long and 15 inches in diameter inside bark (dib) at the small end. This conversion could be used for average comparisons when accuracy of 10 percent is acceptable. Since the board foot unit is not a true measure of wood volume and since products other than dimension lumber are becoming important, this unit may eventually be phased out and replaced with the cubic meter unit.

☆U.S. GOVERNMENT PRINTING OFFICE: 1982-505-012:33

Considine, Thomas J., Jr.; and Frieswyk, Thomas S. Forest
statistics for New York--1980. Broomall, PA: Northeast.
For. Exp. Stn.; 1982; USDA For. Serv. Resour. Bull. NE-71 .
118 p.

A statistical report on the third forest survey of New York conducted in 1978 and 1979. Statistical findings are based on data from remeasured and new 10-point variable-radius plots. The current status of forest-land area, timber volume, and annual growth and removals is presented. Timber products output by timber industries, based on a 1979 updated canvass of manufacturers is presented.

ODC 905.1(748)

Keywords: Forest survey, area, volume, growth, removals, counties.

Headquarters of the Northeastern Forest Experiment Station are in Broomall, Pa. Field laboratories are maintained at:

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